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Delivered before the North London Medical and Chirurgical Society on April 11th, 1907.

BY JAMES GREY GLOVER, M.D. EDIN.,
PRESIDENT OF THE SOCIETY; EX-MEMBER OF THE GENERAL MEDICAL COUNCIL.

GENTLEMEN,—A very significant incident in the history of France and of human thought was recorded in the *Times* of Dec. 24th last and has great interest for members of the medical profession. The article I speak of was headed "The Great Men of France," and it relates how it had occurred to one of the most widely circulated French newspapers, the *Petit Parisien*, to take a plebiscite of the French nation on the question of the relative pre-eminence of great Frenchmen in the last century. It appealed to its readers all over France to vote and was rewarded by a response from no less than 15,000,000 of the French people. The result was delightful and, in my humble opinion, profoundly just and true. I shall give you the chief figures in a few lines from the interesting telegram of the *Times* correspondent. "The winner of the recent contest is Pasteur. Victor Hugo runs him close, having received 1,227,103 votes against 1,338,425 for the world-renowned man of science. But it is characteristic that two men of peaceful pursuits should precede on the list of these great Frenchmen who might have appeared at first sight to have most contributed to that special kind of glory known as French. Gambetta follows Victor Hugo with 1,155,672 votes. Then comes Napoleon with 1,118,034 and Thiers with 1,039,453 respectively." The *Times* correspondent well says: "Fifteen million answers have been received and what gives value to this striking demonstration is that we have here the opinion of average France, not that of a political coterie or of a cultivated *élite*. Such a vote raises one's hopes of the race—almost of Fame itself." Said Milton:

> "What is glory but the blaze of fame,
> The people's praise, if always praise unmix'd?
> And what the people but a herd confus'd,
> A miscellaneous rabble who extol
> Things vulgar, and well weigh'd, scarce worth the praise?"

Here, I venture to think, is a hopeful exercise of the popular judgment, which well introduces what I have to say of the outlook of medicine from a scientific point of view and which we may well set off against some of the discouraging facts—I hope temporary and evanescent facts—among ourselves as to the popular estimate of the greatest achievements of medicine.

It has been disquieting and humiliating to the medical countrymen of Jenner to watch the outbreak of prejudice against his great discovery. This is not the time or place to labour that question in detail. I am glad here just to say this, that there are slight indications that this aberration is confined to certain sections of the people and even so is showing signs of abatement. Dr. O. A. Wickham of Barnsbury and other friends have supplied me with proof that the public vaccinations keep up to an average and I am delighted to gather from a letter in THE LANCET of March 30th that in the recent London County Council election the antivaccinists got a severe rebuff at the polls, conveying a hint to Liberals that sound Liberalism must not include the right to have an infectious disease, horrible and injurious in itself, and involving great risk to others. But returning to the French plebiscite, you may say "Pasteur was not a physician." Well, in a technical sense he was not, but his earliest interest and yearnings in connexion with his great discoveries had a medical character and found in medicine their most splendid and epoch-making application. In 1863 Napoleon III. wished to see Pasteur. Pasteur was introduced to the Emperor by his distinguished teacher, J. B. Dumas. Referring to the emperor's questionings Pasteur says, "I assured the emperor that all my ambition was to arrive at the knowledge of the causes of putrid and contagious diseases." Less than a week ago we as a profession and the nation at large celebrated, with the sympathy and congratulations of the civilised world, the eightieth birthday of Lord Lister—the complement[1] of Pasteur—who quickly saw, with no less genius and conviction than those of the French *savant*, the proportions and the significance of the immense discovery that was made by Pasteur, for it determined that living air-borne particles were at the root of fermentation, and, as he soon surmised, at the root of putrefaction, suppuration, gangrene, and infections generally.

Pasteur and Lister together, anticipating so happily the *entente cordiale*, yet working in separate fields, in spite of scoffers and scepticism evolved gradually, but with splendid scientific steadiness, their great views and the application of them to the prevention and cure of disease in animals and plants. In 1866 I was privileged, by detention in Glasgow for a fortnight, to see, and to be deeply impressed by, the application of these views to surgery by (as he was then) Mr. Lister, Professor of Surgery in the University, and to learn at first hand the marvellous results in compound fractures and other cases obtained by the use of means to prevent putrefaction in wounds based on Pasteur's discoveries, but perfected from day to day by Lister, till now they constitute the chief glory of surgery and of medicine too. It is indeed not too much to say that the work of these two men, so modest, so careful, so intensely and laboriously and patiently scientific in their methods, with all that has grown out of it, will soon have saved, if they have not already saved, as many lives as Napoleon I. and Napoleon III. together contrived to destroy.[1] It is not only the direct effect of their methods that we have to note here, but the fact that they have established our profession on a firm basis of science and close observation which has raised it in the estimation of men and which must for ever serve as a guide to those who profess the art of healing. In support of this conclusion I need only remind you of the revolution in medical education which is ever aiming at securing in medical students a sounder knowledge of the principles of science and of the fundamental subjects of chemistry and biology as the only safe foundation for teaching of more strictly medical subjects. This change is for the moment trying to many old and famous schools of medicine, but it is beneficent and inevitable and the schools which most heartily recognise and accept it and all it implies, will increasingly attract the majority of students. And men in practice, like ourselves, must catch the contagion and keep abreast as well as we can with the new spirit and methods of medicine.

Before I leave this notice of what I shall call the master-builders of modern medicine it is as tempting as it is unnecessary to say that these men had in their composition not only the subtle and indefinable characteristics of genius but those moral qualities—of faith, of reverence, of high principle—which ever enter into the greatest men, and which have been conspicuous in the leaders of medicine from Hippocrates downwards. If the highest influence of our profession is to be realised it will only be by this combination of intellectual and moral qualities which were eminently illustrated in Pasteur. If I might venture a word of advice to my younger friends in the profession it would be to study biography, and especially that of medical men who have influenced their age or their time. Of all biographies, that of Pasteur seems to me one of the most delightful. He was a devout Roman Catholic but no scientific success lessened either his humility, his reverence, or his faith. Nearly 20 years before his death he was overtaken by hemiplegia and he had early losses by death of those whom he most loved; but he remained still the same loving, trusting, working man and achieved after his hemiplegia some of his greatest triumphs. Death is not for the like of Pasteur. He "*remains*" as his great medical colleague Lister will "remain." We may apply to each of them the words of Tacitus: "Quicquid ex Agricolâ amavimus, quicquid mirati sumus manet, mansurum est in animis hominum, in æternitate temporum, famâ rerum."

But it may be thought that I am getting far away from my subject and that we have to come down to the common men and the common work of our profession and to say what is the outlook for them—socially, politically, if you please financially. I have noticed a tendency in some of my

[1] It is pleasant and only fair here to say that Napoleon III. showed much interest in Pasteur and his work and ordered with much persistence the building of satisfactory laboratories for the promotion of his momentous investigations.

brethren to speak somewhat despondingly of the outlook. They see lions in the way and things that threaten the just influence and rewards of medical labour and travail. And theoretically it does not seem very obvious after you have spent a thousand or a couple of thousand pounds in the education of a son for the profession what is to be his immediate reward. Well, if money were the only reward for medical service I should agree that it is not adequate. But I feel sure that there are counterbalancing considerations which will alter the outlook and make ours for all time an honourable and a fairly satisfying profession. And most medical men in their hearts seem to think so. There is one fact which confirms this view, and that is the number of medical men who put their sons into the profession. For my part, I could imagine no greater joy to a medical man than to be succeeded by a son who gives his heart to the profession and finds his delight in mitigating suffering, "obviating," as Cullen puts it, "the tendency to death" and degeneration in his patients and in the community. So strong is this feeling in many medical men that they send not only a son but sons into the profession—two, three, or six, or eight. This is a pretty clear proof that they think it an honourable profession and one worthy to be followed. I cannot go so far myself. The profession is overstocked and I believe in variety of callings in families. But given some check to overcrowding, and devotion to medical work in the spirit of Pasteur and Lister, I think ours one of the best, if not the very first, calling in the world.

Let us briefly enumerate a few of the obstacles that in the opinion of some are injuring the outlook of medical practice as a calling. They may be said to be: (1) the growth of specialism; (2) the prevention of disease; (3) the license of unqualified practice; (4) the competition of certificated midwives; and (5) the abuse of medical charity.

Let me say a few words on each of these subjects.

(1) *The growth of specialism.*—It is no doubt true that there is public demand for the specialist and that this is carried absurdly far, as if the body consisted of detached parts and members which could be treated apart and without reference to the whole. With accumulating wealth, not always accompanied with accumulations of wisdom, there will be an increasing number of persons who will be tempted to go straight to a specialist whether their pain be in the little finger or in the great toe. What is the remedy? It is for every general practitioner to make his knowledge as *special and as particular as possible*, to be himself vigilant and intelligent in his diagnosis and ready in the use of his remedies. The public is quick to perceive resource and readiness in general practitioners and it is only fair to admit that if consultants are claiming to specialise they are hard run by many general practitioners who find themselves at home in every region of the body and every organ, whether it be the ear or the eye, the uterus or the lungs. The facilities of special cliniques and the multiplication of clinical and resident officers in hospitals tend to specialise medical education, and equip the student and practitioner who is in earnest for dealing with all the ordinary ills he is likely to meet with. After all, the general practitioner can often be himself a specialist and the intelligent of the public must see that his ordinary adviser who specialises his knowledge is in the best position to take a large and accurate view of his case and to treat it effectually.

(2) *The wholesale prevention of disease.*—If disease is prevented, as it is on a large scale by municipal measures and by education, it is said that our occupation is threatened. But let me reply that these very municipal measures imply medical service and employ large numbers of medical men. This demand will increase as the hygiene of homes, schools, factories, ships, shops, armies and fleets is more and more urged by law and by sanitary authorities. And there remains the melancholy fact that no efficiency of sanitary law or administration will ever be likely to prevent the thousand and one diseases on which general practice rests. There is, I think, some abuse in the system under which the hospitals of our Metropolitan Asylums Board offer gratuitous treatment to those who are able to pay or to keep and isolate their sick at home. These hospitals were built for the poor. The original Act provided that those who could pay should be made to do so. In the feeding of school children provision is suggested for recovering money from the parents where possible, but it is so much easier for officials and politicians to bleed the taxpayers and to pauperise the objects of benevolence, that I fear that if care is not taken to revive the old English virtue of independence and thrift we shall lose some of our work in a way that will benefit neither our patients nor the State.

(3) *The license of unqualified practice.*—This has always existed, more or less, and in my judgment cannot be prevented by law. The remedy is for general practitioners to perfect their own superiority over prescribing druggists and quacks of all sorts and to show an interest in the smaller complaints which often harass and hinder so much the life of the working classes. I like that remark of Sydenham, perhaps somewhat exaggerated, contained in a letter to Dr. Brady: "Nevertheless, I have always thought it a greater happiness to discover a certain method of curing even the slightest disease than to accumulate the largest fortune, and whoever compasses the former I esteem not only happier but better and wiser too." It is not with medicine as with law, "*de minimis non curat lex.*" Medicine should care much—and here I differ from many—about trifles; small complaints the beginnings of delicacy and ill-health—a toothache, nail-biting, a swollen gland, a pyrexial tendency, defects of strength or colour or animation. Without being fussy it is possible to avert much pain and ill-health and to put people and families on better lines of health. Intelligent care of this kind is much needed in all ranks of life and ought to be rewarded according to the means of those benefited. Such intelligent care is appreciated by all classes of patients, and not least by the working-classes, out of whose modest means one has seen the finest spirit of gratitude and received some of our most precious if small fees. I believe in no mere hospital treatment for these classes. I believe in the family practitioner who brings the children into the world and knows them and their parents and watches their health from year to year, their circumstances, their habits, even their bad habits, and treats them with consideration and kindly warning. An immense function of the medical profession lies in this direction and can only be discharged by a continuous family medical man whose observations may have much of a scientific character and add greatly to the influence of the profession. We have seen what has been done in the matter of acute and septic disease by the prodigious and pregnant discoveries of Pasteur and Lister who have stimulated a whole army of followers and imitators. There is another great field of work almost yet untilled and promising an abundant harvest to those who will study it with care—I mean the subject of what I may call degeneration as distinguished from disease. Much is being done to mitigate the mischief of acute diseases. But they do not make up the bulk of medical work. I went through one or two of my death-certificate books lately and took note of the causes of death in 100 cases. I found the average age of my patients at death was 63½ years, and that only 12½ per cent. of these died from acute diseases. The respectable age—the grand climacteric—attained by my clients may be due to special circumstances and I am sure is more to be explained by their good constitution than my skill or the composition of my medicines. But I should be sorry to think that we, I or any medical man, had nothing to do with adding to the longevity of our clients and that of their families—thinking, as I do, that our continuous care is of the very essence of medical service. In the great study that is before the nation of the complicated causes of degeneration, the medical profession should bear a distinguished part, and there is no branch of the profession more able to advance this inquiry than the great body of general practitioners who, in so doing, will raise still higher the public estimate of the profession. Remember that Jenner began his study of the subject of vaccination while he was yet in practice in the country.

(4) *The competition of certificated midwives.*—Gentlemen, it was my duty as a member of the General Medical Council for 15 years to consider the question of the mischief done by ignorant and untrained midwives in the practice of their craft, which is as old as Genesis, and had come to be controlled in almost all other civilised countries of the world. I never hesitated as to the duty of the State to check and to control this pathetic and terrible evil and I think still as I did then. I must not detain you with the *pros* and *cons* of this controversy. But as I supported the demand for such legislation I have a special right and duty to protest against its defects. In all my action on this question I contemplated the midwife (and the whole Council did the same) as being trained for and acting

only as a midwife in ordinary cases, and under strict compulsion to send for a medical practitioner on the occurrence of any abnormality in mother or child, and it seemed to me that when Parliament passed a Bill compelling the midwife to send for a medical man it was an obvious and logical conclusion that Parliament would provide for the payment of any practitioner so summoned, and I moved the insertion of a provision to that effect in the Bill. But Parliament found some technical excuse for not inserting such a provision. The omission is a serious flaw in the Act discreditable to Parliament. Parliament must correct this great fault, which if not corrected may have very deplorable consequences. The Act with this defect is a cruel wrong to the lying-in woman and is most unfair to the medical profession. I have every reason to believe that the Midwives Board desires the supply of this defect and has repeatedly urged the Privy Council to introduce legislation to this effect. The profession should appeal persistently to both the Midwives Board and to the Privy Council for redress. The case of the poor lying-in woman is altogether an exceptional one, and the exceptional legislation of 1902 must be completed by securing to the medical profession payment for services which Parliament itself virtually compels. And it should be done without taint of pauperism. The profession, too, will look to the Midwives Board to keep the practice of midwives severely restricted to the case of normal labours. It would be a breach of trust with the medical profession, and altogether retrogressive, to admit the right of imperfectly educated midwives to deal with labours that do not comply with the normal and physiological standard. With these criticisms I leave the question of the Midwives Act. With advancing intelligence and providence every respectable working man will want to give his wife the best chance in her puerperal time and will seek to place her under the best medical care he can command. And so I expect the medical profession, viewing obstetric work as essentially surgical work, with all the risks of an open wound and the credit of all possible asepticism to be gained, to maintain its supremacy and superiority in this great branch of medical practice—the elevation of which has corresponded with the transfer of responsibility from midwives to medical practitioners. On the score of humanity as well as for the credit of medicine, the practice of midwifery must be kept at the highest pitch of perfection.

(5) *The abuse of medical charities.*—It only remains for me to notice one more possible hindrance to the full success and prosperity of the medical profession. It is one that is kept well before the public but has not hitherto been effectively grappled with by the authorities of our hospitals and dispensaries—I mean the abuse of medical charities. There is no body of men to whom the public is more indebted than the committees of our hospitals and dispensaries with their anxious responsibilities, unless, indeed, it be the medical and surgical staffs of these charities, who perform gratuitous services, which in point of responsibility, physical fatigue, and mental wear and tear are little realised. But let them be well assured that they are risking the very existence of voluntary hospitals by the methods of distributing their alms. There is no excuse for them now considering the readiness of medical men in every district to meet the case of the industrial classes on reasonable and self-respecting terms and the high efficiency of the medical profession to deal with the run of the ills ministered to in the out-patient departments. The medical profession, on the other hand, must meet these classes half-way. I was one of a committee in the General Medical Council for seeking to hold up the character both as regards ethics and remuneration of the club system, and I am bound to admit that the members of the Council who met the representatives of the great industrial lodges and friendly societies of Great Britain were impressed with their reasonableness and their desire to meet fairly the claims and views of the profession. I still believe that good terms could be reached with these bodies, and in this hope and the hope for better discipline against all abuse of medical charities I rest my belief that the great working classes of the country will come to find themselves better looked after by *well-paid and continuous medical attendants* than by the casual, irregular, and demoralising system of gratuitous out-patient relief, however admirable and good in emergencies or extreme cases.

And now, gentlemen, you will be pleased to think that I am about to bring my remarks on the outlook of medicine to a close. Had I my life to begin again I should study medicine, for the intense interest of it, for the companionships of it, and even for the security of a modest income which every earnest and enthusiastic and fairly intelligent man may expect. You remember Johnson's tribute to the memory of Robert Levett, the old apothecary who lived in his house, and without whose advice it was said the great sage would not have been content even with that of the whole College of Physicians:—

> No summons mocked by chill delay,
> No petty gains disdained by pride;
> The modest wants of every day,
> The toil of every day supplied.

We cannot all be Pasteurs, Listers, or Jenners, but we are their successors. We enter into their heritage, we apply their discoveries, we practise the principles which they established. It does not seem to be pecuniarily profitable to make researches or discoveries. Lord Lister probably never made or cared to make the income which some of his followers have very properly made by the use of his discoveries and methods. Both he and they have their reward. They both belong to the one great profession which has the strongest claim on the gratitude of the public, and in its very practice is attended with satisfactions beyond all mere financial considerations. If I am right, and if the profession is true to itself, it cannot cease to count for much in its social and political future of all civilised communities.

Lectures
ON
THE LYMPHATIC SYSTEM OF THE CÆCUM AND APPENDIX.[1]

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THE lymphatic vessels of the intestine, from the duodenum to the splenic flexure of the colon, accompany the branches of the superior mesenteric artery and, after having passed through a variable number of glands lying between these branches, have a common termination in the large glands which lie around the stem of the artery at the root of the mesentery: their efferent vessels pass separately, or united into a single trunk, into the receptaculum chyli. At the stage of development when the small and large intestines are enveloped in a single common mesentery, and in a few cases where this primitive condition persists, it is very evident that the vessels and glands contained within this mesentery are incapable of subdivision into definite groups, except in the most arbitrary way. They are all mesenteric. Without losing sight of this fact, the change in the disposition of the intestine and its peritoneal investment, resulting in the separation and distinction of the mesentery inclosing the small intestine, from the transverse meso-colon inclosing the transverse colon, and the disappearance of the ascending meso-colon, permits the division of these lymphatic glands into three separate groups: (1) mesenteric, lying between the layers of the mesentery, draining the small intestine; (2) meso-colic, lying between the layers of the transverse meso-colon, draining the transverse colon; and (3) ileo-colic, lying behind the parietal peritoneum in the space bounded by the attachment of the mesentery below and to the left, the transverse meso-colon above, and the ascending colon to the right. It is this last group to which we have confined our attention in the present instance.

Before describing the lymphatic vessels and glands it is necessary to state briefly the disposition of the ileo-colic blood-vessels, since the abdominal lymph vessels are closely associated with the arteries and veins, and all three systems

[1] The Arris and Gale Lectures delivered at the Royal College of Surgeons of England on Feb. 18th and 20th were based on the work recorded in this and the previous lecture (THE LANCET, April 20th, 1907, p. 1061).

of vessels should be considered together to insure, where possible, a common nomenclature. The ileo-colic artery arises from the superior mesenteric artery on the third part of the duodenum. At the lower border of the duodenum it leaves the root of the mesentery and proceeds downwards and outwards behind the parietal peritoneum towards the angle between the ileum and the ascending colon. At a distance of about an inch from the ileo-colic angle it breaks up into several branches—appendicular, anterior ileo-colic, posterior ileo-colic, ileal, and colic. At a variable distance from its origin it usually gives off the right colic artery, though this vessel may spring independently from the superior mesenteric trunk.

The terminal branches are inconstant in their mode of origin; usually the main artery gives off the appendicular and then divides into the anterior and posterior ileo-colic branches. The anterior branch gives off the ileal vessel, the posterior the colic. The appendicular artery descends in or near the free margin of the meso-appendix and terminates at the tip of the organ. It gives off branches, gradually decreasing in length, to the whole of the appendix. In many cases, however, one or more branches pass from the posterior ileo-colic artery to the proximal portion of the appendix. The ileal branch passes onwards in the mesentery to anastomose with the terminal portion of the superior mesenteric, and it supplies several inches of the ileum. The anterior ileo-colic descends in the ileo-colic fold and supplies the anterior surface of the cæcum, its terminal twigs reaching the root of the appendix; it also supplies a branch to the end of the ileum. The posterior ileo-colic descends behind the ileo-cæcal junction, supplying the back of the cæcum and the terminal portion of the ileum. As we have already noted, it often gives a branch or branches to the proximal portion of the appendix. The colic branch ascends along the inner side of the ascending colon and anastomoses with the right colic artery.

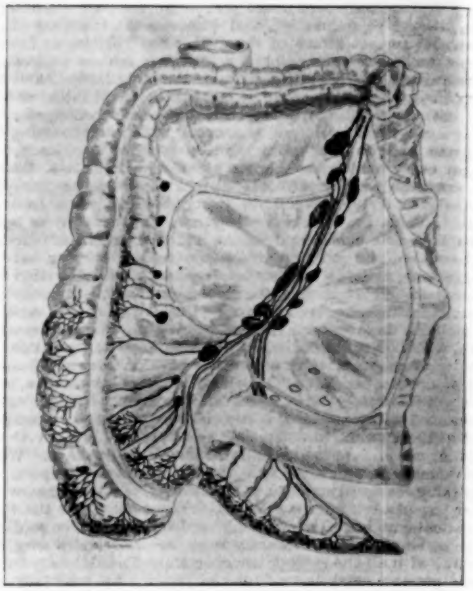
The following account of the lymphatic glands and vessels of the cæcum and appendix is based upon an examination of 25 specimens injected by the method of Gerota. The ileo-colic artery is surrounded from its origin to its division by a chain of lymphatic glands varying in number from 10 to 20, and in size from that of a pin's head to that of an almond. The chain is continuous, often without interspace, with the glands around the trunk of the superior mesenteric artery. Though the chain is frequently concatenate, it usually shows a tendency to fall into two groups, one lying on and below the lower border of the duodenum and the other above and around the point of division of the artery. For purposes of description it is of great convenience to divide the main ileo-colic chain into two groups, an upper group and a lower group. This division, as we have intimated, though frequently quite arbitrary, is not always so. The reasons which prompt us to make use of this subdivision will appear when the course of the lymphatic vessels coming from the cæcum and appendix is under consideration. It would be difficult to give an accurate description of these vessels without subdividing the main chain of glands.

At the point where the ileo-colic artery gives off its terminal branches the chain of glands becomes broken up into several groups which are associated with the branches of the artery. These groups are constant in position though not in the number of their constituent members, and are sufficiently distinct from each other to be described as separate groups; still they must be regarded merely as outlying portions of the main chain. Five groups may be described: (1) anterior ileo-colic; (2) posterior ileo-colic; (3) appendicular; (4) ileal; and (5) right colic.

The anterior ileo colic glands vary in number from one to four, the usual number being three. They lie in the ileo-colic fold close to the wall of the cæcum; they may be continuous with the lower group of the main chain but it is more common to find an interval between them. The highest gland, which lies in the upper part of the fold just above the ileum, is almost invariably the largest. It is very unusual to find members of this group at a lower level than the lower margin of the ileo-cæcal junction.

The posterior ileo-colic glands are more numerous and less regularly disposed; this group is evidently the direct continuation of the main ileo-colic chain, and it is often impossible to mark the exact point of transition. The greater number of the glands lie in the angle between the ileum and the colon; some small glands are to be found lying in the groove between the cæcum and colon on the posterior surface of the cæcum and in about half the number of specimens we have examined one or more project between the layers of the meso-appendix at its cæcal extremity.

FIG. 4.



Lymphatics of the cæcum and appendix. Anterior view.

The appendicular gland.—Between the layers of the meso-appendix at or near its free border a single small gland may sometimes be seen lying on the appendicular artery. (Specimens B, C, D, &c.) Its position on the artery is variable; it may lie some distance from the base of the meso-appendix or it may be quite close to its attachment. In one case (Specimen 30) it lay only partially between the layers of the fold. As the lower group of the main chain lies just above the attachment of the fold it seems evident that this gland is a prolapsed member of that group.

Ileal glands.—In the right end of the mesentery small glands lie in association with the ileal branch of the ileo-colic artery. They are most irregular in number and in size and only receive some of the vessels from the terminal portion of the ileum. As their efferents pass to the main ileo-colic chain we have regarded them as a subsidiary group of this chain.

The right colic glands, numerous but small in size, lie along the inner side of the ascending colon. They are in close contact with the wall of the colon, many of them being situated in the sulci in front of, and behind, the internal tænium. The lower ones are associated with the colic branch of the ileo-colic artery, the upper with the branches of the right colic artery. As their efferents terminate in the glands of the ileo-colic chain we speak of the whole row, from the cæcum to the hepatic flexure, as the right colic glands. Singularly few glands are to be encountered along the trunk of the right colic artery. In some of our specimens (A and N) we have seen one or two small glands, but in the majority none are to be found.

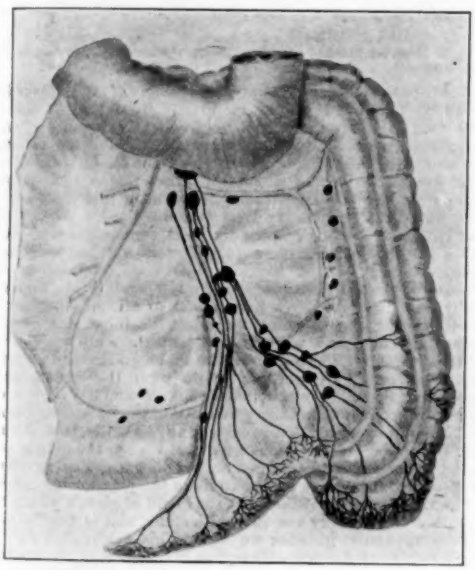
The plexuses of origin of the lymphatic vessels have been well described by various writers. We shall only briefly consider them in order to refer to some points of interest. According to Kelly and Hurdon[2] the lymphatic plexus of the appendix may be divided into three layers—superficial, middle, and deep—lying respectively under the peritoneum, under the circular muscular coat, and under the muscularis mucosæ. Each layer consists of a capillary plexus draining into larger collecting vessels which issue from the wall of the organ at the attachment of the meso-appendix.

[2] Kelly and Hurdon: The Vermiform Appendix and its Diseases, 1905.

They consider that there are channels which afford communication between the three systems, but that they must be insignificant as the injection did not often pass from one to the other. We are not able to say whether the injection passes readily from the subserous layer to the submucous, but we find that the injection does pass readily from the submucous to the subserous, and that by inserting the needle into the submucosa all the vessels in the wall of the appendix can be injected. Further, Kelly and Hurdon state that only a limited area of the surface lymphatic plexus, representing the area draining into one collecting vessel, can be injected by one puncture. They say, "This demonstrates the existence of valves between the capillaries and the first system of collecting vessels and it demonstrates also the absence of valves in the capillaries ..... a focus of infection inside such an area would therefore be practically isolated from the rest of the appendix." We have found no difficulty in injecting the entire subserous network of the appendix and even also of the apex of the cæcum from one puncture in the appendix. We believe, therefore, that there is not only free communication between the various systems of plexuses but also between one part of a plexus and another. We cannot entertain for a moment the idea that an infected area is isolated from the rest of the organ by the arrangement of its lymphatics. The plexuses of origin in the cæcum resemble in every respect those of the appendix.

The lymphatic vessels which issue from the appendix divide themselves into three sets. The first set consists of the vessels which drain the organ from its tip to near its root; the other two sets are formed by the vessels which arise from the root. The vessels forming the first set vary in number from eight to 15; leaving the wall of the appendix they enter the meso-appendix and ascend between its layers with the branches of the appendicular artery to its main stem around which they form a leash of from four to six vessels. These accompany the artery to its origin where they meet the lower group of the main ileo-colic chain.

FIG. 5.



Lymphatics of the cæcum and appendix. Posterior view.

Many of them end in the glands of this group; others, however, ascend to the glands of the upper group in which they end at variable levels. In some cases a gland in front of the duodenum is seen to be injected by vessels running directly from the appendix. When such vessels are traced to their origin we find that they may arise from any part of the appendix, and quite as frequently from its proximal as from its distal portion.

The appendicular gland when present receives vessels from various parts of the appendix, from the apical portion as in Specimen C, from the body as in Specimen B, and from the root as in Specimen 30. In those cases where there is an accessory artery or arteries the lymph vessels from the proximal portion of the appendix accompany them and are received by the posterior ileo-colic glands. The vessels which drain the root of the appendix are arranged in anterior and posterior sets. The anterior vessels run from the appendix over the anterior surface of the cæcum and enter the ileo-colic fold. They invariably pass the glands here situated and end in members of the lower ileo-colic group. In some cases even this group may be passed, as is shown in Specimen 75, where vessels can be seen to thread their way among the lower group glands and to enter a gland of the upper group just below the duodenum. Posteriorly, vessels arise from the root of the organ and ascend over the posterior surface of the cæcum and in the cæcal attachment of the meso-appendix to the posterior ileo-colic glands. Some vessels, in this case also, are seen to pass this group without interruption to reach glands of the lower group of the main chain. Possibly the great number of glands in the ileo-colic corner may account for the fact that we have not seen in any instance a direct vessel of this set to the upper group. The vessels which drain the cæcum are simple in their arrangement. From the apex the vessels run with those of the root of the appendix and enter the same groups of glands; anteriorly they run in the ileo-colic fold to the lower group; posteriorly with the posterior ileo colic vessels to the posterior ileo-colic glands and the lower main group. In one specimen, No. 87, a vessel issues from the muscular coat of the cæcum near the apex, descends on the appendix for a short distance, and then ascends with the appendicular vessels to a gland of the lower group at the origin of the artery. Tixier and Viannay[3] describe a similar vessel in one of their specimens, but were unable to follow it to its gland. From the anterior surface of the body and base of the cæcum the vessels pass to the ileo-colic fold. Many of them enter the anterior ileo-colic glands, which appear to intercept in particular those vessels coming from the base of the cæcum and from the lower part of the colon. Some vessels, chiefly those from the lower part of the anterior wall, end in the lower main group and in some cases (Specimen 83) even in glands of the upper group. In one case (Specimen 74) one of these vessels turned backwards in the upper part of the ileo-colic fold and entered a posterior ileo-colic gland. From the posterior surface vessels run from the body and base of the cæcum to end in the posterior ileo-colic glands. Some vessels, however, pass these glands and end in the lower group of the main chain.

The vessels from the terminal portion of the ileum may be divided into three sets. The greater number of the vessels issuing from the last six inches of the small gut pass into the mesentery and end in the glands of the ileal group. But this is not the only path. If injection is made into the ileum as far out as six inches from the ileo-colic junction vessels will be seen to arise from the plexus, run to the right along the gut, to end in the anterior ileo-colic glands or in the lower main group. Another vessel pursuing a similar course along the free margin of the gut turns into the ileo-appendicular fold and enters the cæcal end of the meso-appendix, terminating in a gland of the posterior ileo-colic group. From the posterior surface of the extremity of the colon short vessels pass directly to the posterior ileo-colic glands. The vessels arising from the ascending colon pass transversely over the anterior and posterior surfaces of the gut and enter the numerous small glands which we have named the right colic glands. Here, as in the case of the vessels proceeding from other parts of the intestine, the glands do not intercept all the vessels; many pass inwards and end in the glands of the main chain.

The efferent vessels of the gland groups into which the lymphatics of the cæcum and appendix pass run as follows: those from the anterior ileo-colic glands enter the lower main group; in one specimen (83) vessels may be seen to end in the upper group. Those from the posterior ileo-colic group run to the lower group. In one specimen (N), an efferent from one of the posterior ileo-colic glands, injected from the back of the cæcum, passes upwards to a gland on the right colic artery. The efferents from the appendicular gland run to one of the glands of the lower group. Efferents from the lower group run to glands of the upper group, while the

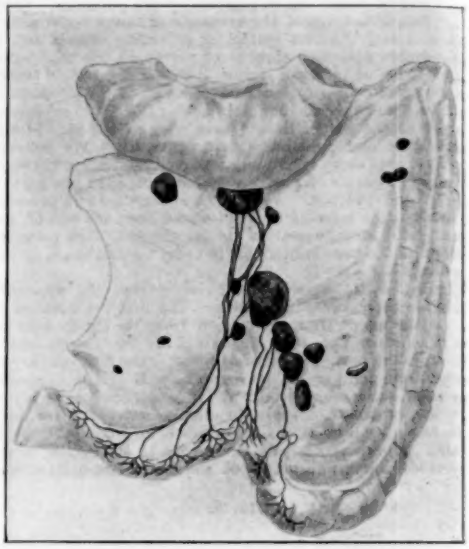
[3] Tixier and Viannay, Lyon Médicale, 1901, No. 13, pp. 471–79.

efferents of the upper group pass to the glands around the trunk of the superior mesenteric artery.

The anatomy of the lymphatics of the cæcum and appendix has been much obscured by an unnecessary subdivision of gland groups and by a redundant nomenclature. Poirier and Cuneo[4] describe three groups of glands lying in the meso-appendix; they term these the retro-ileal, the sub-ileal, and the juxta-cæcal appendicular glands. Clado in his classic memoir[5] attaches prime importance to a gland situated in the base of the meso-appendix close to the cæcum; this gland he considers to be the chief recipient of the vessels of the appendix. This view was supported by Lafforgue,[6] who gives tables showing the number and frequency of occurrence of the glands in the meso-appendix. These descriptions limit the attention to the glands near the appendix; in the paper by Tixier and Viannay[7] we have another illustration of this contracted view of the lymphatics of the appendix in this remark: "Lafforgue, who has studied the glands of the appendix, has well shown that this organ is often furnished with more than one gland." They proceed to show that the lymphatic vessels of the appendix drain into three groups of glands, cæco-appendicular glands lying in the outer angle of the meso-appendix, ileo-appendicular at its inner angle, and meso-appendicular glands lying between these; all these groups are inconstant in presence and number. They advance a step in pointing out that there is more than one lymphatic current from the appendix.

By far the most complete and satisfactory description is that given by Polya and von Navratil[8] from the study of 13 injected specimens. This paper seems to have escaped general notice, as it is never quoted, and it did not come within our knowledge until our own work was well advanced. In the main our observations agree with theirs, but they are able to quote only one case in which lymphatic vessels from the appendix pass to the higher glands of the ileo-colic chain. Kelly and Hurdon[9] gave an elaborate account of the lymphatic plexuses, vessels, and glands of the appendix. In the main their description agrees with that of Poirier and Cuneo, but they describe four types of lymphatic circulation from the appendix. We have purposely avoided any classification into types because there is such variety in the arrangement of the vessels and distal glands that it would be possible to multiply the types to any extent and their enumeration would merely obscure the main and important points. The subdivision of the glands into small groups with the consequent increase in the number of names leads to great confusion, of which we find numerous examples in the literature. The gland described by Clado, lying in the outer angle of the meso-appendix, is commonly placed by other authors in the inner angle. In all these descriptions too much importance is attached, perhaps unwittingly, to the glands in the meso-appendix. The specimens from which our description is made show that the glands in the meso-appendix are merely prolapsed members of the posterior ileo-colic gland group and of the lower group of the main ileo-colic chain. The gland which we have termed "appendicular," lying in or near the free border of the meso-appendix, is met with at various levels, sometimes only projecting between the layers at their attachment, sometimes just below the attachment, and sometimes a considerable distance below. When the specimens are compared it becomes very evident that the gland is merely one of the lower group glands. Similarly, the gland or glands which are sometimes found in the upper outer angle of the meso-appendix close to the cæcum are really members of the posterior ileo-colic group; consequently this gland, or glands, on which so much stress is laid by Clado and others, is always present, but does not always lie in the meso-appendix. The group certainly does not require a special name. But the presence or absence of glands in the meso-appendix is a matter of the slightest importance, in view of the fact that these glands even when present do not intercept more than a few of the appendicular lymphatics. It is of importance, and it is the point to which we wish to draw attention, that lymphatic vessels from any part of the appendix, root, body, or tip, run past the glands in the vicinity of the organ to glands of the main ileo-colic chain, reaching even those members of the upper group which lie on the duodenum. On this point we were entirely uninformed by previous descriptions and it is of great importance to recognise the fact that practically any gland of the ileo-colic chain, from its upper to its lower end, may be a primary gland for the appendicular vessels.

FIG. 6.



Lymphatics of the cæcum and appendix. Two appendicular arteries are present with lymphatic vessels accompanying each.

The account of the lymphatic system of the appendix given by Lockwood differs materially from that of other authors. He says: "I have so frequently found a chain (of glands) along the inner side of the right colon behind the ascending meso-colon, that I have come to the conclusion that this is the course which the appendicular lymphatics mainly pursue. Others without doubt open into the mesenteric glands."[10] There is also a statement to the effect that the lymphatics of the appendix form connexions with the chain of glands lying close to the common and external iliac arteries. In a footnote Lockwood maintains his position against the criticisms of Poirier and Cuneo and of Kelly and Hurdon. We have found in all our specimens the numerous glands which lie along the inner side of the ascending colon and we conclude that these are the glands referred to. But these glands, the right colic glands, drain the colon and have nothing to do with the cæcum and appendix. Some of our specimens (Nos. 55 and 83) show that the main ileo-colic chain may lie close to the ascending colon and it is quite possible that in cases of appendicitis, from which Mr. Lockwood's observations were made, when the glands are perhaps considerably enlarged and when the ascending colon is distended, they may appear to lie in the position described by him. It seems probable that the chain of glands which he has observed is really the ileo-colic chain and is not formed by the right colic glands; we find in his description strong confirmation of our contention that in diseases of the appendix this chain in its entirety may be affected. We have not met with any communication between the lymphatics of the cæcum and appendix and the glands lying along the common and external iliac arteries. A great deal of attention has been directed to the statement of Clado that there is a communication between the lymphatics of the appendix and those of the ovary and uterus, in the so-called appendiculo-ovarian fold. Clado states that he found this communication in two injected specimens. Tixier and Viannay in one case

[4] Poirier and Cuneo: Les Lymphatiques, tome ii., fasc. 4, of Traité d'Anatomie Humaine; translated and edited by C. Leaf.

[5] Clado: Comptes Rendus de la Société de Biologie, 1892, vol. iv., p. 142.

[6] Lafforgue: International Journal d'Anatomie et de Physiologie, 1903.

[7] Loc. cit.

[8] Polya and von Navratil: Deutsche Zeitschrift für Chirurgie, 1903, Band lxix., S. 421.

[9] Kelly and Hurdon: Loc. cit.

[10] Lockwood: Appendicitis, its Pathology and Surgery. Second edition.

found a gland in this fold. Lockwood supports these statements from clinical observations. Poirier and Cuneo formally deny the presence of such a communication and Polya and von Navratil have not been able to find it. We have never seen a trace of this communication in any of our specimens, and we do not believe that it exists. Kelly and Hurdon suggest that there is such a communication between the lymphatics of the appendix and those of the ovary by means of the subperitoneal lymphatic plexus which exists everywhere in that tissue, but they have been unable to find lymphatic vessels running from the appendix in the appendiculo-ovarian fold. Comparatively little attention has been given to the vessels of the cæcum in the past. This may be due to the fact that this organ is far more difficult to inject than any other part of the intestine. Most writers simply state that the vessels from the cæcum run to the neighbouring glands. We would emphasise what has been already stated, that while the majority of the vessels from the body and base of the cæcum are intercepted by the anterior and posterior ileo-colic glands, some of these, together with those of the apex of the organ, frequently pass beyond these glands to high glands of the ileo-colic chain, that vessels of the cæcum may ascend in the meso-appendix, and that they freely communicate with the vessels of the appendix.

We have now to consider the practical importance of the information we have derived on the lymphatic system of the cæcum and appendix. We find here a large agglomeration of lymphatic glandular tissue devoted to a comparatively small portion of the alimentary canal. It is evident that this mass of glands is of great importance and that its defensive powers will frequently be called upon. The changes which may take place in the glands of the ileo-colic chain as a result of disease are of the greatest practical importance. Acute inflammation may occur as a result of infection from the appendix in cases of appendicitis, or from the cæcum in rare cases of typhlitic ulceration; tuberculosis is met with not infrequently, and the glands may be invaded by secondary deposits in cases of malignant growth of the cæcum and appendix. Acute inflammation of the glands of the ileo-colic chain in cases of appendicitis is possibly more common than is generally recognised, although it is rare for suppuration to occur. Quenu[11] states that it is common in cases of fulminating appendicitis to find the glands of the chain enlarged and inflamed and he believes that the presence of a tender area reaching from the right iliac fossa upwards and inwards towards the middle line is an indication of glandular inflammation and affords some guidance as to the severity of the infection. If it were possible during operations for acute appendicitis to ascertain the condition of the glands of the ileo-colic chain it is likely that they would frequently be found in the condition described by Quenu. Few cases have been recorded in which suppuration of these glands has occurred. Ricard[12] reports a case in which an operation was performed for acute appendicitis. The patient left the hospital apparently well but returned with acute symptoms necessitating a re-opening of the abdomen. Ricard found a chain of infected glands, some of which were full of pus. They were extirpated with a good result. Bloodgood[13] describes a rare case of appendicitic abscess situated between the layers of the mesentery. The patient was a child; "one could palpate in the middle zone of the abdomen, a mass about the size of two fists slightly moveable from right to left but not from above down ..... (on opening the abdomen) beginning at the cæcum and extending at least to the third lumbar vertebra between the folds of the mesentery there was a mass ..... on separating the exudate at the junction of the ileum and cæcum pus was encountered and a large abscess cavity was found extending towards the vertebral column between the folds of the mesentery." On careful consideration of this case it is difficult to avoid the conclusion that the abscess was due to suppuration of the glands of the ileo-colic chain.

In view of the frequency of appendicitis the comparative rarity of glandular suppuration is somewhat surprising. Corner[14] suggests that it is due to the fact that the glands become tolerant and inured to the products of bacterial action, so that they are very rarely excited to the pitch of suppuration. It is possible that glandular abscesses are frequently overlooked; for example, an abscess originating in the posterior ileo-colic glands may easily be opened during the course of the operation without any suspicion of its nature being aroused. It must be remembered in this connexion that, as we have already shown, lymph vessels run directly from the appendix to any gland, even the highest, of the ileo-colic chain, and that there is therefore no reason why the highest gland should not become infected and suppurate just as readily as the lowest. It is conceivable, therefore, that a glandular abscess, due to infection from the appendix, might form in front of the third part of the duodenum.

The ileo-colic chain of glands is frequently affected by tuberculosis. It is common enough in children suffering from abdominal tuberculosis to feel a mass of enlarged glands in this situation, and on examination of these glands in a series of necropsies they frequently show signs of previous disease. Corner[15] describes the case of a boy who had a well-defined mass in the region of the cæcum of about the size of a cricket ball. On opening the abdomen the omentum was found adherent to the mass. "After gradually stripping this off a large rounded mass ..... was found lying in the mesentery, adherent to the cæcum, the ascending colon, and partly to the transverse colon. During manipulation a weak spot in the wall of the swelling gave way, tuberculous caseous pus escaping ..... the cavity extended upwards and inwards towards the root of the mesentery." The cavity was cleaned and obliterated by suture, recovery ensuing. Gerard Marchant[16] reports two cases in which he had treated diseased glands in this region by operation. In one case during the removal of the appendix it was found that there was a mass formed by two caseous glands, apparently in the ileo-colic fold. They were enucleated with ease. In a second case during an operation for appendicitis a mass of enlarged glands was found on the anterior surface of the cæcum; these were curetted and cauterised. In the majority of cases the affection of these glands will be merely an incident in a general tuberculosis of the mesenteric glands. Should operative treatment become necessary the intimate relation of this glandular chain to the ileo-colic artery and vein must be borne in mind; if these vessels are damaged by a too vigorous attempt to remove the diseased glands the vitality of a considerable portion of the intestine will be endangered.

It is in connexion with malignant disease of the cæcum and appendix that the exact anatomy of these lymphatic vessels and glands becomes of the greatest importance. Indeed, it is extraordinary how little attention has been directed to this question in the past. It may be partially explained by the fact that the attention of surgeons has been so much bestowed on the perfection of the mechanical means of restoring the continuity of the intestinal canal after a malignant growth has been removed that the possibility of removing the lymphatics at the same time has received little attention. Another factor which has militated against any serious attempt to remove the lymphatic apparatus in connexion with the cæcum is the fear always present in the mind of the surgeon who is removing a portion of intestine of interfering with the blood-supply of the intestine at the suture line. Furthermore, it is an accepted doctrine that glandular infection does not occur in the early stages of malignant disease of the intestine; whether this doctrine is worthy of the belief which has been accorded it in the past is open to question. To illustrate the methods usually adopted at the present time in dealing with the glands in cases of carcinoma of the cæcum a quotation may be given from one of the most recent and complete works on abdominal surgery. Moynihan,[17] in his description of the operation of excision of the cæcum, after giving the preliminary steps, says: "The ascending colon must then be freed from the posterior abdominal wall to which it is often adherent. For this purpose the parietal peritoneum to the outer side of the colon is incised and raised up towards the colon. The stripping must be continued towards the middle line, behind the termination of the enteric mesentery, so that any enlarged glands—and of these there may be many—are made free also ..... as a general rule the tumour mass will by this means be rendered sufficiently mobile to permit of its easy withdrawal from the abdomen ..... in some few instances, however, owing to the density of the adhesions, or the shortness of the enteric mesentery, or to the enlargement of glands ..... this may

[11] Quenu: Revue de Chirurgie, 1902, vol. xxv., p. 749.
[12] Ricard: Ibid., 1900, vol. xxi., p. 267.
[13] Bloodgood: American Journal of the Medical Sciences, vol. cxxvi., 1903, p. 601.
[14] Corner: THE LANCET, Dec. 23rd, 1905, p. 1825.
[15] Loc. cit.
[16] Gerard Marchant: Revue de Chirurgie, 1900, vol. xxi., p. 268.
[17] Moynihan: Abdominal Operations, 1905, p. 332.

not be possible. In such circumstances the mesentery is tied off in sections and divided on the proximal side of the enlarged glands." It will be seen that although any palpably enlarged glands are removed by this method no attempt is made to deal with a possibly infected lymphatic area.

A method of removing a growth of the cæcum or ascending colon has recently been published by F. S. Bird.[10] His description of the operation is as follows:—

> The tumour is located and its removal being decided on the transverse colon is pulled down, two forceps are applied to it close together, a heavy one on the proximal side, and the gut is divided with large scissors in one cut. Swabs are used to avoid soiling the cavity, and the heavy forceps attached to the gut is allowed to hang out of the wound, a proceeding which puts the mesocolon on the stretch. The branches of the middle colic artery are easily found, for they stand out by reason of the tension and the fact that they are the thickened arteries of an elderly person. Two or three branches have to be secured. The right colic artery now invites attention and can readily be tied far back by a single ligature; this devascularises a large portion of meso-colon, which can be speedily severed by large scissors. The amount of gut at present hanging out of the wound is considerable, as the cæcum "is in the air" without support. The resulting traction shows the ileo-colic trunk in strong salience. Forceps are then placed on the ileum, about four inches from the junction of the great and small intestine, and the gut is divided; the distal end now depends from the wound, so that the whole portion to be resected is hanging by the ileo-colic artery and some peritoneum. This blood-vessel is ligatured far back, the isthmus of tissue left is divided close to it, and the resected gut, two forceps, and the ileo-colic glands fall out of the wound altogether. There is no need to investigate the important ileo-colic lymphatic area, for it has gone.

By this operation Bird appears to secure some of the lower glands, the anterior and posterior ileo-colic groups, but it is evident from the fact that he secures the right colic and the ileo-colic arteries separately, that the important glands of the main ileo-colic chain are not removed.

Considerable permanent success has, however, attended the removal of malignant growths of the intestine, on these lines. In the case of carcinoma of the sigmoid colon, this may be easily understood; these growths are usually of the constricting variety; they produce obstruction of the intestine, in the majority of cases, long before any tumour is palpable and at a comparatively early stage of the disease. Surgical interference becomes necessary for the relief of the obstruction; the condition is recognised and, in favourable cases, the growth may be removed while still in an early stage and probably before glandular infection has taken place. In the case of malignant growths of the cæcum and ascending colon it is a different matter; such growths are almost always recognised as palpable tumours before they have produced symptoms of intestinal obstruction of such severity that operative treatment is imperative. That is to say, they have reached a later stage and are much more likely to have given rise to glandular infection at the time the condition is recognised. It is impossible for us to bring forward any figures demonstrating the frequency of glandular metastasis in cases of malignant disease of the cæcum and ascending colon, or of the extent of the glandular affection. Such cases as we are referring to are comparatively rare; a record of the history after operation of a number of cases would be very difficult to obtain, and even if we were possessed of such a record it would be impossible to say what proportion of the recurrences was due to persistence of the disease in the lymphatic glands and what proportion was due to liver metastasis already present at the time of removal of the primary growth and what to local recurrence.

Text-books have little to say on the subject of lymphatic infection in cases of cancer of the intestine. It is well known that it does occur but of its frequency and extent we know little. It must be remembered that, as we have shown, lymphatic vessels having their origin in the cæcum and colon pass directly not only to the subsidiary gland groups of the ileo-colic chain but even to the lower and upper groups of that chain. This is particularly well seen in Specimen 83, where a vessel arising on the anterior surface of the cæcum is seen running in the ileo-colic fold, past the glands there situated, past the lower group of the main chain, to end in a gland of the upper group. This condition is not so frequent in the case of the cæcal lymphatics as in those of the appendix, but it does occur and account must be taken of its occurrence. It is obvious, therefore, that if infection of the glands takes place by a process of embolism, the lower glands of the main chain, and even the upper glands are just as likely to become infected, and that as early in the course of the disease as are the glands in close relation to the cæcum.

In operating for malignant disease, if any attempt is made to remove glands which are possibly infected, the upper glands of the ileo-colic chain must receive attention. It seems advisable, therefore, in these cases to apply those principles which have been found so successful in the treatment of malignant disease of other organs—viz., to remove not only the organ containing the primary growth but the lymphatic glands receiving vessels from it, the vessels themselves, and the tissues in which these vessels lie. This can be done without a doubt; indeed, there is in the whole body no organ which is so happily placed as the cæcum in this respect; it is possible to remove all the glands receiving vessels from the cæcum and all the vessels, without leaving any subsidiary channels untouched, as must be done in the case of other organs, such as the breast. And this without any very serious extension of the operation usually practised—indeed, with considerable gain, the more radical operation giving a far better control over the blood supply and enabling the surgeon to recognise and avoid important structures which may be wounded and have frequently been wounded in the past. In cases suitable for radical treatment the operation which is suggested by the arrangement of the lymphatics is as follows. After opening the abdomen and exposing the field of operation the lower border of the third part of the duodenum is defined. The peritoneum over this is divided for a short distance and careful search is made for the ileo-colic vessels. The fatty tissue surrounding the vessels, which will contain the uppermost gland of the ileo-colic chain, is pushed downwards and the vessels cleaned by gauze stripping. At this stage the greatest possible care must be taken not to wound the duodenum. The artery and vein are then ligatured in two places and divided, the point of division of the artery being about half an inch from the superior mesenteric trunk. This step will devascularise the whole of the ascending colon, and it is well at this stage to select the point on the colon, at the hepatic flexure or, if an excessive amount of contraction of the colon has been caused by the growth, on the transverse colon, where the gut shall be divided. The peritoneum is then divided from the duodenum to the selected point on the colon, but the section of the gut is deferred until towards the end of the operation. In doing this it will be necessary to secure some branches of the middle colic artery, and if the right colic artery has a separate origin from the superior mesenteric it will also need attention. The peritoneum of the anterior layer of the mesentery is then divided in a line reaching obliquely downwards to the ileum. The ileo-colic and right colic vessels, with the accompanying chain of glands, the fatty tissue, and the overlying peritoneum, are then stripped downwards to the ileum and cæcum and outwards to the colon. In doing this the ureter will be encountered and must be carefully avoided. The cæcum is then lifted up and the peritoneal reflection from it and from the outer side of the colon on to the posterior abdominal wall is divided; a portion of the posterior layer of the mesentery of the small intestine will also require section.

The cæcum and appendix, the whole of the ascending colon, and the terminal portion of the ileum, with the ileo-colic and right colic vessels and the accompanying lymphatic chain, can then be withdrawn from the abdomen, only remaining attached by the continuity of the intestine. At the previously selected point the colon is divided. Some care is needed in determining the point at which the ileum is to be cut through. The terminal portion is supplied by an arcade formed by the ileal branch of the ileo colic artery and the terminal portion of the superior mesenteric artery. In order to obtain a sufficient blood supply to the ileum at the point of section it is necessary to divide it at some distance (about six inches) from the ileo-cæcal valve at about the point where the last part of the superior mesenteric artery runs downwards in the mesentery. If it is divided too close to its termination the blood supply of the cut end will be endangered owing to the removal of the ileo-colic artery.

It is not within the scope of this paper to discuss the various methods of restoring the continuity of the intestinal canal after a portion has been removed. A satisfactory method of completing the operation will be to close the ends of both ileum and colon, to draw the termination of the ileum up to the transverse colon, and to effect a lateral anastomosis between the two. In this way the mesentery will be drawn over the raw area on the posterior wall of the abdomen and may be held in position by a few points of suture through the peritoneum. The question naturally

[10] Bird: THE LANCET, Feb. 17th, 1906, p. 440.

arises, Is it necessary to perform this formidable operation in cases of malignant disease of the appendix? If an undoubted malignant growth of the appendix is found, particularly if it extends on to the cæcum, then it certainly would be advisable to do so. A study of recorded cases demonstrates the fact that frequently the condition has not been suspected until a microscopical examination of the appendix, which has usually been removed for recurrent attacks of appendicitis, has been made. In such cases the extensive operation is probably unnecessary.

A SERIES OF CASES OF GOITRES REMOVED UNDER COCAINE ANÆSTHESIA.[1]

BY J. LYNN THOMAS, C.B., F.R.C.S. ENG.,
HONORARY SURGEON TO THE CARDIFF INFIRMARY AND THE HAMADRYAD HOSPITAL, ETC.

ORDINARY goitres are fairly common throughout Wales and Monmouthshire, and in some counties they occur with great frequency, whilst in three counties—viz., Pembroke, Carnarvon, and Anglesea—they are rarely met with. Two years ago Dr. William Williams, medical officer of health of the county of Glamorgan, and I sent a circular letter with questions relating to the prevalence of goitre to every medical practitioner within the above areas and we received replies from 231. We have not yet completed our investigations, but I am allowed to make use of some of the facts that we gleaned from this inquiry. There are many districts where goitres are very prevalent and few in which they are absent. With regard to the causation of ordinary goitres, the opinion of medical practitioners who have observed the rapid transformation of the sparsely populated rural districts of Glamorgan and Monmouth to the present densely populated condition is of great importance and value. For example, Dr. T. Hall Redwood of Rhymney states that 30 years ago ordinary goitres were common in his practice, but since the construction of the new waterworks they have practically disappeared. Similar views have been received from others practising in the county of Glamorgan. The following extract from a letter I received from Mr. ——, upon whom I operated for goitre in July, 1903, is of interest in connexion with what seems to me to be the effect of change of water-supply upon the development of goitre. He says: "I am one of six children; the first four were born near Aberystwyth and the other two were born after my parents removed to Glamorganshire, where they obtained drinking water from a deep well in the garden. 1. My eldest sister was ten years old when we came to Glamorgan and a few years after she had a goitre and was an invalid on that account for seven years, before the late Mr. Greig Smith operated upon her in October, 1895, and was under treatment for some months afterwards. 2. My eldest brother was eight years of age when he came to Glamorgan, and before he was 12 years of age developed a goitre, and was operated upon by Sir Frederick Treves in November, 1893, at the London Hospital. He lost his voice for three months and eventually recovered it completely. 3. I came to Glamorgan when six years old and a goitre appeared when about 10 to 12. It grew steadily until it was removed by yourself when I spent the first week of my summer holidays of 1903 at your private hospital, and have been well ever since. 4. Next brother, free from goitre, and went to Leatherhead to school when 10 years of age. 5. Sister, had goitre, noticed when 19 years of age. 6. Sister, had no goitre, and went to school at Bristol."

The eldest three of the above family developed goitres within a few years after going to their new home, and the two boys showed symptoms between 10 and 12 years of age. The younger members of the family spent more time away from their home and the absence of goitre is ascribed to this fact by my correspondent. I have known a lady from a non-goitrous district go to reside in Derbyshire for two years and to return with a well-marked goitre; she was treated by injection of perchloride of iron at great risk to her life and with permanently ugly scarring of the neck. All the above facts support the view that goitres can be acquired fairly quickly by living in a goitre-producing district and as far as I can judge from analysis of the evidence collected, the distribution of goitres in Wales and Monmouthshire supports the view that the causation of this disease is to be found in drinking water. For example, I would instance parts of the counties of Cardigan, Carmarthen, and Pembrokeshire, which form a smooth undulating plateau with rounded hillocks and gently hollowed valleys. There is total absence of prominent rugged escarpments or precipitous hillsides or narrow valleys running in east and west or north and south or any other preponderating direction. I know of goitres developing in this district in people who have spent their whole life on the top of the hills, as well as in those who have always resided in the lowest part of the valley.

Diagnosis.—In the majority of cases there is no difficulty in recognising the character of a goitre in the neck, but in a case of symmetrical lipoma of the neck in a woman, aged 62 years, I did not suspect its character until operation for its removal was done. The lipoma had none of the ordinary attachments to the skin and moved up and down with deglutition. In intrathoracic goitres and in those which are partly within and partly without the thorax—"the diver" type—Professor Kocher has demonstrated the value of examination by the fluorescent screen in determining whether operation is practicable by observing the mobility of the lower border of the intrathoracic shadow of the goitre.

[Mr. Lynn Thomas here exhibited photographs of the different types of goitres. 1. Symmetrical enlargements of the lateral lobes of the thyroid gland (it weighed three and a half pounds after removal). 2. Enlargement of one lobe. 3. "The diver" type of goitre (Kocher). The isthmus and the left lobe were enlarged. Cyanosis, dyspnœa, and dysphagia existed and when the head was bent forward the goitre was well within the thorax. It was a difficult case and trying to the patient when the intrathoracic portion was delivered. The late Alderman Dr. Naunton Davies was present and said that the operation reminded him of the pre-anæsthetic days. 4. Malignant goitre with enlarged glands on the right side. 5. Goitre of isthmus photographed six days after operation.]

Treatment.—The number of operations that I have performed are as follows:—

No mortality.
- 55, under local anæsthesia (cocaine, 1 per cent.), including 4 Graves's disease.
- 1 without any anæsthesia.

17 under general anæsthesia, including 5 Graves's disease.
- 1 death from respiratory complications } Graves's.
- 1 " " hyperthyroidism }
- 1 " " sepsis (one of my early cases).

Another case of Graves's disease died suddenly and without any warning in the operation theatre before anything was done. I had had the patient under observation at the Cardiff Infirmary for some weeks; during that time I fully explained to her that the nature of the operation was only ligature of an artery, and apparently I enjoyed her full confidence. After she was carried into the operation-room she chatted with me quite pleasantly and I left her for a few minutes to get ready for the operation when she expired quite suddenly, without any warning, before I returned. Had I injected cocaine subcutaneously, or even manipulated her neck, I could find a plausible explanation for the cause of death.

The case in which I used no local anæsthesia was due to my hypodermic syringe breaking after Kocher's screen had been fixed round the patient's neck and the preliminary marking of the skin incision had been completed. As this accident meant abandoning the operation I decided to proceed at once by telling the patient that the chief pain she would suffer would be from insertion of the needle. She stood the operation very well and next day when I was removing the drainage-tube and skin sutures she told me that the worst pain she felt was during the injection of the cocaine, which in the circumstances meant incision of the skin.

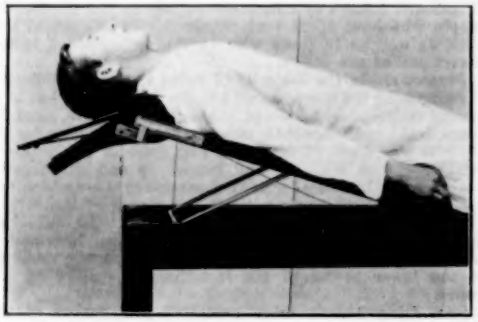
I always use Kocher's "collar incision" whenever possible as it gives ample room and exposes the blood-vessels at right angles to their course and leaves a scar which is scarcely perceptible. When Professor Kocher was the guest of the Cardiff Medical Society last year I took the opportunity of expressing my appreciation of his method and of pointing out that the description of the scar left by the "collar incision" had been described in Wales over 1000 years ago—in legend. We are told that St. Winifred had her head severed from her body, and that St. Beuno performed the operation

[1] A paper read before the Medical Society of London on April 22nd 1907.

of restoring it to its former position in such a skilful manner "that not even a scar was left, but only a thin white thread-line encircled her beautiful neck as evidence of the miracle of the seventh century."

During the last two years I have adopted Dr. Albert Kocher's[1] suggestion of placing the patient in the position shown in the illustration (Fig. 1). This position makes a great difference in the amount of oozing and of engorgement of the veins and renders the operation much easier. In large goitres requiring long incisions I mark the skin at right angles to the "collar incision" in two or three places according to requirements, and these serve as landmarks for accurately re-uniting the divided platysma myoides subcutaneously. (Fig. 2.) About one hour before operation the patient's neck is shaved in order to remove the downy hair and surface organisms and is then thoroughly cleansed with ether-soap and spirit, and a protective covering soaked in a 5 per cent. carbolic lotion is put on until the operation is commenced. The hair bordering on the neck is well brushed with carbolic lotion and the head is covered with a sterile rubber cap. The patient's knees are strapped to the table and the hands are placed at the side in suitable bags which are tied together under the back. Then Kocher's screen for neck operations is fixed so that the risk of contamination of the wound from accidental vomiting, &c., is obviated and the patient cannot see anything or anyone concerned with the operation. The patient is then covered with suitable sterile sheets and the surgeon and his assistant wear dry sterile thread gloves; then the neck is marked by drawing the edge of the scalpel very lightly round it in the position which later forms the collar incision; by this manœuvre no pain is inflicted but sufficient blood exudes to form a thin red line under which from one to two drachms of a 1 per cent. solution of cocaine are injected by means of Kocher's syringe from end to end so as to form a continuous subcutaneous ridge. As soon as the injection of cocaine is completed the collar incision is made at once and the upper flap is first dissected upwards and consists of skin, subcutaneous tissue, platysma myoides, and the fascia covering the anterior surface of the neck muscles. Every blood-vessel exposed is first clamped by two Kocher forceps and divided between them so that the amount of blood lost is a mere trifle. The lower flap is then formed.

FIG. 1.



Kocher's position.

FIG. 2.

The collar incision. × shows the guide marks.

In certain cases it is necessary to divide the sterno-hyoid and sterno-thyroid muscles in order to facilitate the delivery of the goitre; in order to prevent atrophy of these muscles they must be divided near their upper or lower ends according to the exigencies arising, and by so doing the nerve supply to the muscles will not be interfered with. In order that the condition of the neck should be restored as nearly as possible to its normal appearance, and also that the resulting scar should approximate in its cosmetic effect that reputed to have been the case in that of St. Winifred, one must endeavour in the first place to restore to their normal conditions every divided muscle by carefully re-uniting the ends, and in the next place to sew the skin together by means of a very fine needle to avoid puncture scars, and lastly the drainage-tube must be removed at the expiration of from 18 to 24 hours, together with the skin sutures. Special attention must also be given to accurate apposition of the edges of the aperture left by the removal of the drainage-tube, otherwise slight puckering will take place. When cases require a large number of ligatures, from 30 to 100, I use a little finger reel (carrying silk No. 00) which I devised for the purpose. Fig. 3 shows the method of attaching it on the little finger of the left hand when in use. It is made by Messrs. Weiss and Son. Patients are allowed up on the third day after operation under cocaine and are allowed to go home on the sixth day. When I went to Cardiff in 1888 I looked upon removal of a goitre as an anxious, difficult, and dangerous operation, although my present colleague and friend, Dr. C. T. Vachell, had done pioneer work in this direction at the Cardiff Infirmary and had been subjected to adverse criticism for his daring by those who advocated subcutaneous injection treatment. It was not until I had the privilege and opportunity of seeing Professor Kocher repeatedly perform such operations that my views and opinion were completely changed.

FIG. 3.

The reel.

Cardiff.

[1] Dr. Albert Kocher is Professor Kocher's son.

REGISTRATION COMMITTEE OF THE WORSHIPFUL COMPANY OF PLUMBERS.—Dr. Reginald Dudfield, medical officer of health of Paddington, has been appointed to represent the Incorporated Society of Medical Officers of Health on the Registration Committee for the National Registration of Plumbers.

SEVEN CASES OF GENERAL PERITONITIS TREATED BY OPERATION, WITH FIVE RECOVERIES.

BY B. MAYHEW BONE, M.B., C.M. EDIN., F.R.C.S. EDIN.

IN view of the extreme importance of arriving at some definite conclusions as to the best means to be adopted in the treatment of general peritonitis, I venture to publish my notes of seven cases which I have had the opportunity of treating since May, 1904. I think that they to a certain extent support the views put forward by Mr. A. W. Mayo Robson in his Purvis Oration and published in THE LANCET of Dec. 29th, 1906, that by the limited operative treatment a fair percentage of recoveries may be looked for. In my own series of cases the death-rate is 28·5 per cent. and the recovery-rate 71·5 per cent.

CASE 1. *Appendicitis; general peritonitis; operation; recovery.*—At 10 P.M. on May 30th, 1904, I was called in consultation with Dr. A. S. Robinson of Redcar to see a married woman, aged 52 years, who had been ill for four days. She looked extremely ill and was slightly jaundiced. The abdomen was much distended and a thrill could be felt across the lower part. Her illness commenced with pain in the right iliac fossa, which became general all over the abdomen. During the last 24 hours her condition had become steadily worse but the abdominal pain was easier. No induration or tumour could be felt. She also suffered great pain when voiding urine. I opened the abdomen along the outer border of the right rectus muscle. Foul pus was at once evacuated from the peritoneal cavity. I found the appendix partially gangrenous and perforated, adhering to the bladder. There had been an abscess in the utero-vesical pouch which had burst and discharged its contents into the peritoneum. The pus, which was most offensive, was removed by means of aseptic gauze swabs, the various peritoneal pouches being dealt with one after the other. A large drainage-tube with gauze wick was inserted into the pelvis and gauze drains into the abdominal cavity and right loin. The patient made a good but slow recovery and was out in a bath chair at the end of a month. The appendix contained a concretion and had perforated.

CASE 2. *Appendicitis; general peritonitis; operation; recovery.*—The patient, a man, aged 49 years, was seen by me upon the third day of his illness. He looked extremely ill, with an anxious expression and sunken eyes. His abdomen was very distended. There was general tenderness to touch all over the abdomen; his pulse was 134 per minute. The patient's chance of recovery appeared to be small. I opened the abdomen and found the appendix bathed in foul-smelling pus; there were no limiting adhesions or plastic lymph. The appendix was gangrenous at its distal end and perforated, but no concretion was found at the operation. The foul pus was removed by aseptic gauze swabs, a large drainage-tube was inserted with a gauze wick, and a gauze drain was put in the right loin. Recovery was slow but steady. The wound healed, all but a very narrow fistula, through which after six weeks two small appendical concretions were discharged, when it healed within a week.

CASE 3. *Appendicitis; general peritonitis; operation; recovery.*—The patient, a man, aged 36 years, was seen by me upon the third day of his illness. He complained of tightness and pain all over the abdomen. The pain had commenced suddenly in the right iliac region and had been very severe for some hours; he had had morphine given to relieve the pain. He had vomited green bile twice that day. He looked very ill, with an anxious expression and a pinched countenance. No induration or thrill could be felt. I opened the abdomen and at once found a quantity of foul-smelling pus in the peritoneal cavity. There were no limiting adhesions or plastic lymph. The appendix was free and intensely inflamed, with a black-looking perforating ulcer near its base, there only just being room to amputate it close to the cæcum. Having removed the appendix the pus was cleansed away with dry aseptic gauze swabs and a large drain was inserted with a gauze wick and a gauze drain in the right loin. The patient made an excellent recovery and was up at the end of a month. Cultures of the pus showed the bacillus coli.

CASE 4. *Appendicitis; general peritonitis; operation; death.*—I was called to see the patient, a man, aged 48 years, in consultation with Dr. Douglas Bone of Cartmel, upon the fourth day of his illness. He was extremely ill, with a pulse of 140 and an abdomen tensely distended. Vomiting had occurred at intervals and he had a dry, hard tongue. Operation was advised as holding out the only chance of recovery. His illness commenced with abdominal pain which was at no time particularly apparent in any one place. There was a fluid thrill over the lower part of the abdomen. I performed abdominal section and at once evacuated a pint or so of offensive pus from the peritoneal cavity. There were no adhesions or plastic lymph. The appendix was found and was gangrenous, with a concretion protruding through the tip. Fully another pint of pus was removed from the pelvis and the peritoneum was cleansed as far as possible with gauze swabs. A large drainage-tube was inserted into the pelvis with gauze wicks and other gauze drains were placed in the abdomen and loin. The patient was now so collapsed that I feared he would die upon the table. He was therefore replaced in bed without an enterostomy which I had intended to relieve the intestinal distension and paresis. He never rallied in spite of all that was tried and died on the following morning.

CASE 5. *Ruptured pyosalpinx; general peritonitis; operation; recovery.*—The patient, a married woman, aged 36 years, who had had two children and several miscarriages, complained of abdominal pain which commenced over the right iliac region. Vomiting occurred every few hours. The patient looked very ill. The abdomen was very distended and a fluid thrill could be felt across the lower part. I opened the abdomen and found free pus which was not offensive in odour. The right tube contained a quantity of pus and had ruptured. There were no adhesions or lymph and the tube was not adherent. The tube and ovary on the right side were removed; the left tube was healthy, as was also the appendix. The pus was removed with dry gauze swabs and a large suprapubic drainage-tube inserted with a gauze wick. Several other gauze drains were introduced in various directions. The patient made a rapid recovery and left her bed at the end of three weeks.

CASE 6. *Appendicitis; general peritonitis; septic hæmatoma around the right kidney; operation; death.*—The patient, aged three days, was seen in consultation with Dr. W. Scott on the third day. The following history was given. The infant had screamed the day previous to my visit in what the mother called an "unnatural" way. It had also been "screaming" just previously to my visit. On examination the abdomen was moderately distended and tight, with the legs drawn up and spasm of both recti. Per rectum a tumour could be felt high up on the right side. I opened the abdomen and at once evacuated a quantity of serо-purulent fluid. There were no adhesions or plastic lymph. I discovered the inflamed appendix adherent by one-half of its length to the cæcum. The appendix was removed and a "cigarette" gauze drain was inserted, with a gauze drain in the right loin. The little patient died the following day.

CASE 7. *Appendicitis; premature labour; general peritonitis; recovery.*—The patient, a primipara, aged 24 years, was taken suddenly ill with pain confined to the right side of the abdomen; she was then seven months pregnant. Hot fomentations were applied without relief and the next day labour set in and at midnight she was delivered of a child. When I saw her on the third day of her illness, having been confined the night previous, she was desperately ill. Her pulse was 150 and her temperature was 105° F. She was flushed, with a look of extreme anxiety or even fear upon her countenance. There was distension of the abdomen and the uterus could not be felt. She was also bleeding freely from the vagina. A fluid thrill was thought to be felt. I opened the abdomen in the middle line and found free foul-smelling pus in the peritoneal cavity. This was removed by means of dry aseptic swabs and then the appendix was found free and perforated near its base and intensely injected. The appendix was removed and the pus was carefully taken up on gauze swabs. A large suprapubic drainage tube was inserted with gauze wick and gauze drains were placed in various directions amongst the coils of intestine. The patient made a slow but good recovery.

The chief points in the treatment and after-treatment of this series of cases were these: (1) removal of the cause; (2) removal of the pus as far as possible by means of dry aseptic gauze swabs; (3) free drainage with tube and gauze wicks and plain strands of gauze; (4) care to be as gentle as

possible in all manipulations; and (5) counteracting shock by all means possible. Strychnine and brandy were administered before and after the operation. Gastric lavage was employed before and after operation in cases where vomiting was present. Large quantities of saline solution were administered after operation per rectum every four hours, sometimes with brandy added. Nothing was allowed by the mouth for the first 24 hours after operation except a teaspoonful of albumin water every half hour, and not this if any sickness was present. One-sixth of a grain of calomel was administered at once after operation and one-sixth of a grain every fourth hour until one and a half grains had been given. Turpentine enemata were used with the rectal tube passed high up to relieve flatus and distension. And, lastly, but by no means to my mind the least important, the patients were placed in the Fowler position by means of a bolster beneath the knees and a back-rest, the bolster being retained in position by two bandages tied to the bed head on either side.

I think there are other points of great importance in influencing the result of operative treatment. Firstly, rapidity combined with gentleness in manipulation and thoroughness of operation. Secondly, the administration of the anæsthetic. If the patient has a terror of the operation or is excessively nervous the initial administration of ethyl chloride, I believe, is extremely useful, as it renders the patient anæsthetic in about 30 seconds and allows the exhibition of ether or chloroform to follow it at once without difficulty. It also shortens the duration of the operation in that often the surgeon, if he sees that he has everything prepared, may make the incision under the ethyl-chloride anæsthesia and may have time to open the peritoneum before its effects have completely passed off. This allows of the operation being carried through with the minimum of ether or chloroform, it being only needful to push it a little towards the end if sutures are to be introduced or another incision made for drainage. I consider the limitation of the anæsthetic to the minimum necessary as of extreme importance in these cases. It is also of great importance to keep the patient warm during operation, and to this end a hot-water tank on the operating table is very valuable, and also I employ a jacket for the patient's body with sleeves out of which there is no opening, a small slit being provided at the wrist to enable the pulse to be felt. I also have leggings with socks all in one which pull up to the top of the thigh. These are made of thick woollen blanket and, I find, keep the patient warm. As little of the surface of the body should be exposed as possible.

Lancaster.

THE TREATMENT OF CHRONIC SUPPURATION OF THE MIDDLE EAR WITHOUT THE REMOVAL OF THE DRUM MEMBRANE AND OSSICLES.

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THERE should no longer be any doubt of the fact that chronic suppuration of the middle ear, if promptly treated, is usually curable, with restoration of hearing and with healing of the perforated drum membrane. It appears also that practically every man or woman who suffers from chronic suppuration of the middle ear has disease of the mastoid antrum, and although occasionally the discharge may cease with or without treatment on account of a favourable anatomical formation of the antrum and aditus, this fact does not invalidate the contention that while there is chronic suppuration there is disease of the mastoid antrum. These statements are founded on the experiences of over 500 mastoid operations performed during the various stages of this disease, and in all those patients not in one instance was the mastoid antrum in a condition of health.

Since the publication of a previous paper on this subject[1] many surgeons have seen my patients and operations at the Throat Hospital and have adopted the procedure advocated in a large number of cases with great success. The operation affords no great difficulties, nor is it accompanied by much danger, for after years of gradual diminution mortality has now disappeared among those patients submitted to operation before dangerous symptoms have developed.

The patients referred to in my previous paper were admitted to the Golden-square Hospital because they were serious cases of chronic suppuration in the middle ear; they all had perforation in some part of the tense portion of the drum membrane and the aural disease varied in duration from three months to 18 years. Some had polypus in the meatus, others granulations in the tympanum, one had a discharging sinus behind the ear, all had deafness and fœtid discharge, and some in whom the disease had become acute were in great danger from extensive exposure of the dura mater of the middle brain and the lateral sinus in the acute mastoid abscess. Yet such severe cases as these were shown to be capable of complete recovery, with cessation of discharge, healing of the perforation, and perfect restoration of hearing. These ten patients were exhibited at a meeting of the British Laryngological and Otological Association[2] and the result of the discussion was greatly in favour of the new operation. One or two who took part in the discussion expressed their doubts as to the new method being adequate to deal with "attic" disease (so-called). In my reply, the belief was expressed that by operating in time it would be possible to prevent the "attic" from being involved and that recently, when operating fairly early on three patients with "attic" disease, serious disease of the mastoid antrum had been found in all of them, and probably the "attic" disease would be recovered from when the diseased cavity of the antrum was eradicated. These expectations regarding the possible cure of "attic" disease were so far fulfilled that at the next meeting of the association, a month later, two of those three "attic" patients were exhibited completely recovered from the disease, with the discharge ceased, with the perforation in the membrane healed, and with much hearing restored. The third patient had been removed from the hospital before recovery because she developed an infectious disease which demanded her removal to another institution.

Not only are the ordinary forms of chronic suppuration of the middle-ear amenable to the new treatment, but it is equally effective in the attic form also. In October and November last some of the rarer and more complicated forms of suppuration came under observation and operation, such as "attic" disease (so-called) with perforation of Shrapnell's membrane and chronic suppuration associated with facial paralysis. Particulars of these cases are recorded below and, in addition, details of a most interesting and instructive case in which the operation of ossiculectomy had been performed 12 years previously for the purpose of attempting to cure chronic suppuration in the ear.

The following five cases were exhibited at the meeting of the British Laryngological and Otological Association on Dec. 7th, 1906:—

CASE 1. *Attic disease (so-called).*—The patient, aged 24 years, was admitted to the Throat Hospital on Sept. 21st, 1906, complaining of pain in the right ear, also of a feeling of giddiness even when lying down. There had been discharge for six months from this ear, in which there was a perforation of Shrapnell's membrane. She could hear the watch at a distance of one inch. The Eustachian tube was free but not communicating with the perforation, there being some obstruction to the passage of air through the tympanum, and in order to attempt to save the hearing of this, her only useful ear, operation was decided upon and was performed on Oct. 11th. The conservative operation was adopted, as described in THE LANCET of August 11th, 1906, p. 353.

There was pus in the antrum and that cavity was draining through a perforation in Shrapnell's membrane. The probe was passed completely through the posterior part of the "attic" from the perforation in the membrane to the aditus; air was then blown through. Next, having obstructed the perforation with a wet woollen mop, an attempt was made to force air forwards through the tympanic cavity, from the aditus to the anterior part of the tympanum near the Eustachian tube, and to distend the tympanum, but without success; it escaped through the perforation in spite of the occlusion of that opening by means of the wet woollen mop firmly held. Next, by incision, an artificial opening was made in the anterior inferior quadrant of the drum membrane, and a cannula, which had been prepared for the purpose, was passed through the opening, and an attempt was made to force air backwards through the tympanum from the neighbourhood of the Eustachian tube to the aditus, but this, too, was unsuccessful; the obstruction in the tympanic cavity was unyielding. No further attempts at forcing a passage were made.

In this patient a small part of the bridge above the perforation was removed; this has been done in three other cases in order to examine the attic. On the sixth day after the operation the patient could blow air through the perforation by Valsalva's method, indicating that the obstinate tympanic obstruction had been spontaneously removed; also it was observed that the artificial opening which had been made in the membrane was healed. Before the operation the watch could

[1] THE LANCET, August 11th, 1906, p. 353.

[2] THE LANCET, Dec. 15th, 1906, p. 1666.

be heard at a distance of one inch only; at the present time it can be heard at five inches. This is a most useful ear; it is her only available one, and fortunately it is now safer than if the ear had never been diseased, for the mastoid antrum (the danger zone) has been removed; also all discharge has ceased and the perforation in Shrapnell's membrane has healed.

CASE 2. *"Attic" disease.*—The patient was first seen in July, 1906, with a history of discharge from the left ear lasting two months, following one week of pain. There were giddiness and slight headache. The watch was not heard on contact. Air could not be blown through the perforation by Valsalva's method, though the Eustachian tube was free. There was a polypus about half an inch long in the meatus and after its removal it was possible to see that the perforation was in Shrapnell's membrane. Spirit drops were ordered to be instilled several times a day.

On a subsequent visit a small recurrent polypus was removed and it was found that the otorrhœa had increased. In these circumstances operation was recommended and the conservative one was performed on Oct. 25th. Cheesy pus and a few granulations were found in the antrum and pus in some mastoid cells communicating with the antrum. On opening the cartilaginous meatus as usual towards the conclusion of the operation the membrane was fully exposed and then were removed some granulations from within the attic; a probe was passed through the perforation and the attic into the aditus, air was then blown through. On looking into the posterior attic granulations could be seen.

The experiences gained by the operation on Case 1 did not encourage the attempt to force the tympanic obstruction. Four days after the operation this patient also could blow air through the perforation, which indicated that the tympanic barrier had disappeared. Before the operation the watch could not be heard when in contact with the ear; at the present time it is heard 11 inches away. His recovery was uneventful; the perforation healed and all discharge ceased.

CASE 3. *"Attic" disease.*—The patient was admitted to the hospital on Nov. 2nd, 1906, with a history of four months' discharge from the left ear, tinnitus, and pain over the mastoid. The watch was heard only when in contact with the ear. There was a greyish granulation of about the size of a pea apparently growing through the roof of the meatus but in reality through the upper part of Shrapnell's membrane. Air could not be blown through the perforation from the nose, although the Eustachian tube was clear.

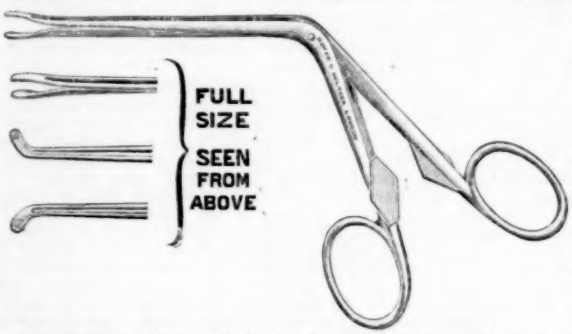
The conservative operation was performed on Nov. 16th. The aditus contained thick pus, and on probing from behind through the attic to the perforation after removal of granulations some white material was thrust out through the perforation, which on examination proved to be a flake of glistening epithelium of about the size of the section of a lead pencil. The probing was continued and two or three similar flakes were removed in the same way. Then air was blown through and all desquamated epithelium was cleared away. This patient progressed satisfactorily and in a few days could blow air through the perforation by Valsalva's method, but developing an infectious disease she was removed. This was a most interesting case and her departure was disappointing.

CASE 4. *Facial paralysis.*—The patient was admitted to the hospital on Nov. 12th, 1906, with a history of nine days' facial paralysis and a discharge from the right ear of 27 years' duration. The paralysis was as marked as in any case in my experience, and the patient's appearance distressed her greatly. The large exposure of the eye demanded the use of pad and bandage to keep the lid down and thus protect the cornea.

The conservative operation was performed on Nov. 15th. The mastoid antrum contained granulations and pus. Air and lotion were passed through the tympanum from the aditus and forced out through the perforation. There were no apparent granulations, even after 27 years' suppuration. This patient went home on Dec. 2nd. The facial paralysis had disappeared, the discharge had ceased, and she could shut the eye of the affected side as strongly as the other. Before the operation she heard the watch at two and a half inches; she now hears it at six inches, and with her best ear she can hear it at ten inches.

CASE 5. *An old ossiculectomy case.*—The patient was admitted to the hospital on Nov. 5th for operation on the left ear, after two years' treatment as an out-patient. There had been otorrhœa for 14 years but never any pain. There was a cicatricial band on the inner wall of the tympanum and below it a carious patch. The whole tympanum was wet with fœtid pus. She could hear the watch at a distance of two inches in that ear and in the other at 14 inches. An operation had been performed at another hospital, probably ossiculectomy and curetting.

The conservative operation was performed on this patient also. The antrum was large and full of granulations wet with pus. The aditus contained granulations. The removal of the pyogenic membrane lining the antrum and aditus and therefore the cessation of supply of pus to the tympanum permitted the latter, although it was in no way treated, to make a satisfactory and rapid recovery. Of course, not a perfect recovery, as the drum membrane and ossicles had been taken away by the operation of ossiculectomy 12 years before. The caries rapidly healed and all discharge ceased. The patient was in the hospital three weeks and on leaving could hear the watch at four and a half inches, twice as far as before the operation.



Forceps for removing granulations, &c., from the tympanum or attic. The full-sized ends show the three patterns which are in use—the straight forceps above, those bent to the right in the centre, and those bent to the left below.

The foregoing notes on these five cases provide matters demanding serious consideration. To take the so-called "attic" cases first, it may be observed that all had disease of the mastoid antrum although the aural discharge was not of long duration nor were there any mastoid symptoms. All had such swelling of the tympanic mucous membrane as to prevent the passage of air and discharge from the antrum or perforation to the Eustachian tube or *vice versâ*. In all that firm obstruction spontaneously disappeared within a week of the operation—that is, as soon as the irritation of the tympanum, arising from the presence of pus from the antrum, had been eliminated by the operative proceedings—and none had "attic" disease, so understood, unless the accidental ingrowth of epithelium in one of them could be so called. This ingrowth of epithelium in time might have spread and its products have accumulated anywhere within the tympanum, but more especially in the posterior "attic" portion, for the rest of the tympano-attic cavity was obstructed by the barrier of swollen mucous membrane referred to above or by granulations, therefore the accumulation taking place in the direction of least resistance would naturally occur in the "attic."

How these facts concerning "attic" disease contrast with what has so long been taught about it! And this information is the result of close observation of the living and could not possibly have been demonstrated post mortem; each of these persons suffered from disease of the mastoid antrum affecting secondarily both the attic and tympanum, and in one patient the conditions leading to cholesteatoma were present. The locality in which the perforation occurred appeared to depend on the amount of swelling in the tympanum, which by protecting the rest of the membrane insured that perforation should take place in Shrapnell's membrane; it was the only part exposed.

In the two cases which remained under observation the discharge ceased, the perforations healed, and the hearing greatly improved; also the vertigo and pain disappeared, implying a termination of the disease, due, not to treatment of the tympanum but to the elimination of the mastoid antrum and its putrid discharge which had been irritating the tympanum. Although the giddiness was due to tympanic conditions, treatment of the tympanum, except destructive operation, would not have removed it. The main disease was not in the tympanum or attic at all but in the mastoid antrum—it was mastoid disease, and thus it should be named. The patient in Case 1, in whom air was blown through an artificial opening, showed that the obstruction to the passage of air through the tympanum was unyielding and that therefore the apposition of the swollen mucous membrane of the inner tympanic wall to the drum membrane must have been an accurate moulding in order to prevent the passage of air under such a great pressure as was used in the attempt to force a passage.

Cases 1 and 2 both complained of giddiness, which can be accounted for by the external pressure exercised upon the incus, by means of the swelling of the mucous membrane of the tympanic inner wall, which, pushing out the lower part of that bone until further progress was resisted by its anchorage to the stapes, pulled upon the stirrup and by dragging on the ligaments tended to diminish the pressure in the labyrinth. This was enough not only to account for the vertigo but might even account for the pain. Tympanic obstruction of a less degree is a very common condition in chronic suppuration and swelling of this kind combined with the amount of blood-supply form the chief factors in deciding where a perforation of the drum membrane shall take place.

The patient in Case 2, with giddiness, pain, and nerve deafness, might have been suspected of having labyrinthine implication, but the symptoms were probably the result of alteration of labyrinthine tension due to tympanic swelling as explained above. The labyrinth is far more rarely involved in this

country than abroad, if statistics are to be considered reliable.

The hearing of these two patients considerably improved after their recovery, but it does not compare favourably with the cases already recorded in THE LANCET and with many other cases treated since, and the reason is not far to seek, for the tension in, and therefore the sensibility of, the labyrinth was altered by the long-continued stretching of the stapedial ligaments; also, the ossicular chain of bones, and their intervening joints, and the vibrating tympanic membrane itself had all suffered by the long-continued stretching and pressure to which they were subjected by the outward swelling of the mucous membrane of the tympanic inner wall. Even better results regarding the hearing might therefore have been expected had they been operated upon even earlier, before the tympanic swelling had damaged the labyrinth and the ossicular chain and attachments. (The hearing of these two patients is slowly and steadily improving.) Again, the whole week of pain suffered by Case 2 before the perforation occurred suggests the gradual accumulation of the drainage from the antrum which appears to secrete but little, and contrasts therefore with the abundant discharge observed when the tympanum is much affected.

Case 3 exhibited conditions indicating the commencement of cholesteatoma, and in this patient it appears to have been due to the implanting of the squamous epithelium of the outer surface of the drum membrane upon the granulation which happened to be in close contact with it. The squamous epithelium was probably first implanted upon the protruding granulation, which being large and coming like a button through a buttonhole might have been tightly nipped round its neck by the edge of the perforation and possibly excoriated there, and once the epithelium from the outer edge of the drum membrane became implanted it might grow and travel over the surface of the granulation, along its stem, and thus inwards through the perforation, until it reached the general mucous membrane of the tympanic attic of which the granulation was a part, and there the effete epithelium becoming thrown off would naturally accumulate and lead to cholesteatoma; also the squamous epithelium might continue to extend over the mucous surface of the cavity. The grey-white appearance of the granulation itself might indeed have indicated a covering of squamous epithelium, but it was unfortunately not microscopically examined.

Observations such as these may assist in settling the disputed origin of cholesteatoma and should it ultimately be generally concluded that this is the way in which it usually originates valuable hints are obtained as to what surgical or other treatment is desirable in order to prevent such a calamity.

From experiences of these cases there appears much difficulty in recognising any disease as peculiar to the attic as well as any peculiar to the tympanum. That such a division seems arbitrary, as the tympanum, and its upper part the attic, together form one tiny cavity; it is an attempt at a distinction without a difference, for granulations or caries may be present in either locality or in both, as in the cases recorded above, the disease merely being modified by the anatomy of the part. Further, that whether the pathological changes are apparently more in the tympanum or more in the attic, the conditions are secondary to disease of the mastoid antrum. Again, the discharge from the antrum which causes the attic or tympanic disease has to pass through the attic in every case to reach the perforation wherever it may happen to be, whether in the tympanic or attic portion of the drum membrane, and to call this disease by the name "tympanic" or "attic" because of the situation of the perforation, high or low, seems devoid of all reason. Moreover, practically all these cases are curable by the same operation if dealt with at the proper time. The following conclusion was therefore ultimately reached—namely, that however diverse the conditions in the ears of different persons may appear to be in the late stages of suppuration, they all appear to fall into one category in the early stages—that is, disease in the mastoid antrum—for it can now be demonstrated that the same principle governs them all, and therefore the same treatment may be expected to be effective in all if carried out at the proper time.

The above cases emphasise the importance of an early operation when the disease settles down into a condition of chronic suppuration. The majority of cases of acute suppuration, however, recover completely; they do not become chronic.

The use of the Politzer bag is especially indicated after operations upon these attic cases, for the ossicles and joints have been pressed upon by swelling, and their loosening and shaking up and the breaking of their adhesions are as necessary here as in any other part of the body after somewhat similar conditions of strain and subsequently an enforced rest.

In Case 4 (with a history of suppuration for 27 years and of facial paralysis for nine days at the date of admission) there can be no reasonable doubt that the cause of the paralysis was the onset of caries, as anything short of that would probably not have affected the bony aqueduct and the nerve after such a long period of disease. This case demonstrated that such a serious disease as caries of the tympanum can be recovered from even without the removal of the drum membrane, as is done in the radical operation, if the cavity is freed from the irritating effects of putrid discharge from the mastoid antrum by a less destructive method, and as there was no apparent protective swelling of the tympanic mucous membrane in this patient there was greater liability to caries of the walls of the cavity as the result of the irritation from the discharge from the antrum.

In Case 5 an operation was performed 12 years ago on the patient through the meatus, probably ossiculectomy, with the hope of curing chronic suppurative catarrh. This case illustrates the fact that ossiculectomy was not to be relied upon to stop otorrhœa, but was in fact futile, for it did not reach the dangerous disease in the mastoid antrum, and thus make the life of the patient safe in spite of the sacrifice of all possibility of restoring the hearing, and even if ossiculectomy would cure the mastoid disease the fact of its destroying the hearing should prevent its adoption. This case shows also that even without the presence of the drum membrane caries can be produced on the inner wall of the tympanum and perpetuated there by discharges draining down from the mastoid antrum, and that it can be recovered from when that discharge is arrested. There can be no doubt as to the presence of caries in this case, for bare bone could be felt by the probe and its situation proved by observation prior to the operation, but more fully demonstrated when the meatus had been enlarged, as is the rule in this method of operation.

To take the facial paralysis and ossiculectomy cases together. In each there was caries in the tympanum; in the first it appeared after 27 years of suppuration and in the second it was observed after disease of 14 years' duration. In both it disappeared when the discharge was arrested by operation on the mastoid antrum, the fountain-head of the suppuration which caused the caries, and not by operating on the seat of the caries in the tympanum. These facts, it will be observed, are in direct opposition to the teaching hitherto in vogue.

Caries is rare; so are the results of that disease such as facial paralysis and labyrinthine suppuration, yet suppuration is extremely common, and if caries was the cause of it, it should always be present. It does not need the presence of caries to cause perpetuation of suppuration, while the mastoid antrum is the factory of fœtid pus, for which the tympanum has to act as the drain and is thereby constantly irritated and perpetually discharging. Caries is not, as has been hitherto taught, the cause of the persistence of suppuration, but according to the investigations noted above it is the effect of that persistence.

Further, and a most important point common to these five cases, serious diseases of the mastoid antrum were found in all of them, even in those of but short duration—a matter that could only be demonstrated by an early operation such as was done in some of them; and this fact again emphasises the contention that practically all cases which do not recover after acute catarrh and relapse into a chronic suppuration have disease in the mastoid antrum. As remarked before, for practical purposes there is no exception to this rule, and the fact that some cases do recover on account of exceptionally favourable conditions of the aditus and antrum (not to be relied upon nor to be diagnosed) does not invalidate the contention that while there is chronic suppuration going on there is disease in the mastoid antrum. The results of these and other operations appear to show that those ears are the healthiest and most vigorous in which the tympanic swelling and granulations are most abundant.

Cases which are devoid of apparent granulations are slower in recovering after operation, and by being less protected are more liable to the penetration of disease into the tympanic walls leading to caries, a far more serious condition, as in the facial paralysis case. Many other pathological matters noticed in this investigation are in entire conflict with the teaching hitherto accepted, and if the old pathology were right the gratifying results of this new treatment at the hands of many surgeons would be impossible; it is however founded, and fortunately so, upon a new aspect of pathology of this disease.

Some surgeons have lately informed me that they are operating by this new method on patients whom they have had under observation for years, but dared not operate by the radical operation as it might destroy the hearing of the only useful ear (such conditions prevailed in Case 1). This operation might be called the conservative operation, because it is designed to save what is essential to perfect hearing; but the name is a small matter as the evolution of the operation was a certainty once the true pathology was known. What, however, was most important was the recognition of the fact that the pathology hitherto taught was not to be relied on, and the duty of acquiring a more accurate knowledge of the nature of this serious disease has demanded years of the closest clinical study, for as long as the old pathology dominated the surgery of this disease no advance was possible; as long as the tympanum was considered the root of the disease so long would the disastrous results of the radical operation and ossiculectomy be perpetuated.

Many questions as to the scope of this operation have reached me from surgeons in this country and abroad; it is not a simple opening up of the antrum and a clearing of that cavity and the aditus followed by drainage, as in Schwartze's operation, which caused so many disappointments and led to the institution of the radical operation, which, on the other hand, went much too far. In the new operation not only the posterior superior part of the meatus is removed, as in some other operations, but the antrum and aditus are practically eliminated, as well as all disease associated with those cavities. The whole posterior wall of the bony meatus and even its arched floor must also be removed, and this latter proceeding is followed in no other operation, but it must be done if that full access to the tympanum which is necessary both during and after the operation is to be assured. This is essential not only for the safe and thorough removal of granulations, polypi, &c., at the operation, but especially for the dressings during the after-treatment, for without the removal of the floor it is impossible to see the whole of the membrane; moreover, a pocket would be left between the arched floor and the membrane where discharge might accumulate.

Already over 100 of these operations have been performed in the country for chronic suppuration, and it is also being practised in America. Between 20 and 30 have taken place at my hands; two surgeons of my acquaintance have, together, and in a shorter period, performed a similar number, and one of them, a resident in a northern city, is so satisfied with his results that some months ago he had adopted this method in 12 out of 15 mastoid operations and has exhibited some of his patients at the local branch of the British Medical Association.

It is not claimed that under all diseased conditions of the tympanum this elimination of the antrum and aditus is to be expected to restore the ear to health, for the drum membrane may be extensively destroyed or completely gone; the ossicles, too, may have necrosed and disappeared, as sometimes happens in scarlet fever and other acute diseases, but this does not occur in chronic disease. For such cases the radical operation will still be required, yet they form a small proportion and will rapidly diminish, as the treatment of this disease is more promptly undertaken on the lines recommended herein. The surgeon's aim should be the restoration of a perfect ear. The aim, however, of the radical operation and the hope of ossiculectomy is to get the discharge stopped with a certainty of a defective ear.

It is as much the duty of the aural surgeon to operate in time to save the hearing as it is that of the ophthalmic surgeon to operate in time in chronic glaucoma to save the sight.

Cavendish-place, W.

RECENT DEVELOPMENTS IN THE THERAPEUTICAL APPLICATIONS OF ARSENIC.

BY J. SNOWMAN, M.D. BRUX., M.R.C.P. LOND.

MODERN advances in the progress of pharmaceutical science are not confined to the invention of highly complex and synthetic organic preparations. Research must necessarily be prosecuted along this line because it has already produced remedies of permanent value to our daily pharmacopœia. But though investigation may mainly proceed in this direction, it will be occasionally worth while to devote some attention to our old-fashioned and time-honoured drugs. This attention will often be rewarded by the discovery that neither all their therapeutical nor their pharmaceutical applications have been exhausted. Some of the recent studies in arsenic exemplify this contention in a striking degree and a review of the present position of this drug in the treatment of disease may therefore be both opportune and profitable.

Arsenic must always command the interest of the clinician because its toxicology is so reminiscent of pathological processes. It is often instructive to study the action of drugs from the point of view of their influence either on structure or on function. The pharmacology of opium, strychnine, and digitalis, for instance, mainly concerns function; while potassium iodide, phosphorus, and arsenic may be regarded as drugs the value of which chiefly depends upon the circumstance that they produce structural alterations in the tissues. If the alteration tends to restore a pathological condition of a tissue to its normal state the drug will be credited with a specific curative action. Our control of pharmacological action is, however, too imperfect to enable us to arrange our employment of remedies in such a manner as to guarantee that structures of morbid anatomy will revert into those of health. The group of drugs formerly known as alteratives possess the property of modifying the nutritive processes in the body. It is obvious that this effect involves definite chemical changes in cell constitution, and advanced changes of this character inevitably modify structure. The great value of alteratives in therapeutics is that they often change pathological processes brought about by disease into physiological processes. Their failure frequently arises from the circumstance that they introduce into the body their own toxic pathological processes. This is exceedingly well exemplified by arsenic, which is able to produce a mimicry of several diseases, much to the discomfiture of diagnosticians. In the nervous system we may have peripheral neuritis with rapid muscular atrophy, or definite myelitis. The intestinal canal may present appearances closely resembling cholera, with granular changes proceeding to fatty degeneration in the epithelial lining, the interstitial tissue and Peyer's patches being invaded by large round granulated cells. The liver may be affected in such a manner as to suggest a diagnosis of acute yellow atrophy. The skin may be the site of lesions the number of which is almost legion. Every anatomical manifestation known to dermatology from a slight erythema to a bulla is represented. The most characteristic appearances, however, are pigmentation, herpes zoster, and hyperkeratosis of the palms and soles. Hutchinson maintains that these thickenings may develop into true epitheliomatous growths.

The sphere of action of arsenic is obviously very extensive when it is allowed to act on the general healthy organism. Its danger lies in its tendency to cause fatty infiltration and degeneration, and its therapeutical applications are accordingly very much hampered, though practical medicine still indicates a considerable field for its employment. Happily, recent investigations are indicating how the drug may be used so as to obtain its therapeutical effects with a considerably diminished risk of incurring its toxic consequences. It is probable that the organism itself provides a defence against arsenical poisoning, in a manner similar to the production of an antitoxin in the case of certain bacterial poisons. It is found that subcutaneous injection of arsenious acid into rabbits in large but not fatal doses is followed by a prolonged leucocytosis. This increase in polymorphonuclear leucocytes, it should be added, is preceded by a temporary decrease in their number. The point, however, is that after the increase has occurred each leucocyte contains arsenic. If a fatal dose is injected no

leucocytosis takes place, neither do the white cells contain any arsenic. The inference, therefore, is that the increase in leucocytes and the presence of arsenic therein are associated with the establishment of immunity or tolerance. The importance of this observation lies in the fact that arsenic has been found of great value in various blood diseases, notably leucocythæmia, pernicious anæmia, and chlorosis. As a result of experimental work it is quite certain that the nutrition of growing bone is improved by the administration of small doses of arsenic. According to Stockman and Charteris[1] the action on bone marrow is also very definite. The leucoblastic cells are formed in increased number and a resulting leucocytosis ensues. There is, however, no indication of any increased production of red corpuscles. On the other hand, excessive doses lead to a hyaline degeneration of the bone marrow cells, with a decrease in both red and white corpuscles. It must be noted, too, that although arsenic is the most approved drug for the treatment of pernicious anæmia it does itself cause increased blood destruction when given in poisonous doses. The pigmentation which is a feature of the toxæmia of arsenic is probably due to the deposit in the skin of hæmoglobin derivatives.[2] The profound influence which arsenic is able to exert on the organism has, as already mentioned, secured it a position in the group somewhat vaguely called alteratives. Its chemical position is, however, more defined as a member of the nitrogen group, which includes also such powerful elements as phosphorus and antimony. Nitrogen is the cardinal constituent of the proteid molecule, but apparently other members of the nitrogen group are able to take its place in the molecule. Obviously the substitution of arsenic for nitrogen must alter the whole chemical physiology of the body. The change manifests itself as a fatty degeneration of proteid tissue, in which the liver, kidneys, heart, and muscle share. There is a larger excretion of nitrogen, mainly in the form of ammonia. The formation of glycogen in the tissues is diminished, but an increase of lactic acid takes place in the blood and therefore its alkalinity is lessened.

The art of employing arsenic in medicine consists of gaining control of its pharmacological action and making it subservient to therapeutic aims. As is well known, the Styrian peasants have long succeeded in applying this drug to the purpose of increasing the vigour of the male population and enhancing the physical charms of the female. Perhaps one of the best-established facts in the therapeutics of arsenic is that it modifies the nutrition of the skin. The adipose tissue is certainly increased, and the Styrian ladies take advantage of this circumstance to improve their complexion. There must, however, be some specific action on the epithelium; fatty degeneration of the lower layers has been suggested. There is also some modification in the orderly process of the shedding of the cutaneous epithelium. The fact, however, remains that its influence in skin disease is a matter of considerable therapeutical value.

The other departments of disease which are favourably affected by arsenic are represented by such diverse conditions as chorea, malaria, and the anæmias. The rationale of its action is indefinite. In chorea, for instance, the abatement of symptoms may be due to improvement in general nutrition or to specific action, either on nerve centres or definite toxins. In malaria the plasmodium is probably destroyed by arsenic, on the analogy of certain observations made in trypanosomiasis, which are referred to later. The clinical value of arsenic in the anæmias, including leukæmia, pernicious anæmia, and also lymphadenoma, is undoubted; but it must be confessed that in view of conflicting statements regarding its hæmatinic action the *modus operandi* remains obscure. It may, however, be laid down as a golden rule in the treatment of chlorosis that arsenic should be combined with iron when the red cell count falls below 3,000,000 per cubic millimetre. In a severe degree of chlorosis the iron may be relied on to increase the hæmoglobin, while the action of the arsenic will assist in the production of new red corpuscles.[3] The pharmacopœial preparation of iron arsenate must be given in such minute doses that the amount of iron contained therein is necessarily a negligible quantity. An exceedingly useful and effective combination of these two drugs is to be found in arseno-ferratose, where the iron is presented as an organic proteid compound and is of undoubted therapeutic activity in chlorosis and cases of secondary anæmia.[4] The arsenic exists in this preparation in the form of arseno-albumin. In regard to other combinations of arsenic reference should be made to bromide of arsenic, which may be given in minim doses of a 2 per cent. solution. This has been found serviceable in diabetic cases with nerve complications. Arsenate of strychnine is a preparation which has been found useful in severe cardiac asthenia of an influenzal type for patients who will not tolerate the usual mixture of iron, quinine, and strychnine.

The impetus to the chemical modification of arsenic was mainly given by the desire to obtain a preparation whose therapeutical value should not be prejudiced by its toxicity. Accordingly, in 1897 Danlos introduced cacodylic acid which is chemically di-methyl arsenic acid. Its sodium salt—sodium cacodylate—is occasionally disguised under the names of arsinyl or arrhenal. The arsenic exists in this compound in very close combination and its liberation in the body is a very slow and gradual process. This consideration is regarded as the explanation of its low toxicity. The cacodylates certainly gained wide popularity as safe and efficient substitutes for arsenic. Their reputation in chronic pulmonary tuberculosis was remarkable and they sustained the credit of arsenic for improving nutrition when metabolism was deranged in wasting diseases. They were applied to every therapeutical purpose to which arsenic is put, but with conflicting results. Fraser, for instance, used the cacodylates in many diseases which are benefited by arsenic, but he could not satisfy himself of their value. Hypodermic injection was the favourite method of administration and $\frac{1}{4}$th of a grain is an average dose. As much as $\frac{1}{2}$ to 1 grain may be given by the mouth. Hefter[5] states that not more than $\frac{1}{50}$th of the cacodylate of soda is decomposed in the body. At any rate, the odour of cacodyl As $(CH_3)_2$ is evident in the exhalations of the patient.

It should be said that some of the older dermatologists of the nineteenth century had already resorted to the hypodermic administration of arsenic in order to prevent the irritative action of the drug on the intestinal mucous membrane and in order to secure its specific virtues with more reliability. When lichen ruber planus was treated largely by pills containing arsenic (Asiatic pills) something like the number of 1000 constituted an average course; but subsequently it was found that 30 hypodermic injections sufficed to attain the same end. In 1897 Herxheimer advanced upon this and injected up to $\frac{1}{100}$th of a gramme of arsenious acid into the veins for psoriasis. He cured his cases in an average of 48 days. The Levico arsenical water has been used for hypodermics with good results. The records of the first attempts at the hypodermic administration of arsenic supply a goodly number of unpleasant accidents, and these to a great extent were responsible for the introduction of the cacodylates.

At the present moment, however, interest in the therapeutical developments of arsenic is concentrated in the combination known as atoxyl. Chemically this substance is meta-arsenic anilid ($C_6H_8NO_3As$). It was first used in 1900 in Lassar's skin clinic, after its properties had been determined by experiments on rabbits. It contains metallic arsenic in the proportion of 37·69 per cent., or, in other words, half the amount of arsenic present in arsenious acid. It possesses one-fortieth part of the toxicity of arsenic or one-twentieth of that of arsenious acid. It is an odourless white powder with slightly saline taste and its solubility in warm water is 1 in 5. Its solution is stable and does not give the characteristic tests for arsenic. Atoxyl has now had a somewhat prolonged trial and the clinical results justify the conclusions that (1) it affords the means of increasing the amount of arsenic given without the risk of poisoning; (2) it possesses in full measure all the therapeutical properties of arsenic; and (3) that its value is proportionate to the increase of arsenic which its administration permits. The favourite method of the exhibition of this drug is by hypodermic injection. Originally $\frac{1}{100}$th of a gramme was given, but experience now shows that the dose should start with $\frac{1}{25}$th of a gramme and go up to $\frac{1}{4}$th of a gramme. When it has been determined to give a course of arsenic over any prolonged period the most convenient plan is to inject $\frac{1}{4}$th of a gramme of atoxyl twice a week. Intravenous and also intramuscular injections are employed, but subcutaneous injections are unirritating and quite efficient. The earliest cases treated by atoxyl were dermatological. They included

[1] Journal of Pathology and Bacteriology, 1902-1903.
[2] Dixon's Pharmacology.
[3] THE LANCET, 1901, vol. i., p. 1146.
[4] Klinische Therapeutische Wochenschrift, March 25th, 1906.
[5] Archiv für Experimentelle Pathologie und Pharmakologie, 1901, p. 45.

alopecia, which showed no improvement, dermatitis herpetiformis, xanthoma, psoriasis, and lichen. The average duration for the cure of 20 cases of psoriasis was 29 days and for ten cases of lichen 25 days.[6] Both these series were treated with external applications in addition. But cases of lichen treated exclusively with atoxyl all gave excellent results. The worst case required 42 injections. It was found that after a few injections the itching of the skin subsided, the papules became flatter and paler, the scaliness diminished, and finally nothing remained but a little faint pigmentation. In regard to psoriasis, the reports indicate that atoxyl must be supplemented by local remedies. After about six injections the infiltration becomes less and the scales decrease, but apparently a thorough cure cannot be relied upon. Guszman of Budapest,[7] however, has achieved such remarkable success by the energetic use of atoxyl in psoriasis without any other treatment that he looks upon it as a specific. He points out the great advantage of this method of treatment when the use of baths and inunctions would be difficult. He agrees, however, that the employment of local measures distinctly expedites the cure. Atoxyl tends to increase the circulation in the cutaneous capillaries, and assists, therefore, in the absorption of pathological pigmentations such as chloasma. A case of xanthoma treated in Lassar's clinic[8] exhibited flattening of the plaques after the fourth injection. The colour became less intense, and after 22 injections a perfect recovery ensued. Again, a young girl whose face was covered with yellow warts received nine injections of atoxyl on alternate days, and this sufficed to cause their absolute disappearance. A series of 18 injections resulted in the absorption of numerous subcutaneous endotheliomatous tumours in the case of a man aged 68 years[9]. Naturally atoxyl has been applied to other general morbid conditions wherein arsenic finds a field for employment. The improvement in nutrition which follows the use of the cacodylates in pulmonary tuberculosis obtains also in the case of atoxyl. Cases of anæmia and chlorosis which appeared to resist iron treatment[10] did well and finally became quite cured under a course of atoxyl. It should be noted that in these cases the first indications of improvement concerned the nervous symptoms of the disease, such as the headache, giddiness, and palpitation. Mendel has used the drug in neurasthenia, hysteria, facial paralysis, sciatica, and spasmodic asthma, and he regards it as a perfect substitute for arsenic. It is eminently applicable in chorea and is one of the most successful remedies for Graves's diseases. In three cases of this condition the symptoms practically subsided in from six to eight weeks. Atoxyl also finds an excellent application in the neurotic disturbances associated with the climacteric.

The very latest investigations into the action of this drug are concerned with the therapeutics of trypanosomiasis. It has been demonstrated by Laveran and Mesnil that arsenic kills the trypanosomes circulating in the blood. It can, however, only be relied upon to cure the disease in an animal which otherwise possesses great resisting power, because this lethal action of arsenic on the parasites ceases with the excretion of the drug or on its combination with the fixed tissue elements. It follows, therefore, that the trypanosomes which have not been destroyed continue to exist and multiply and circulate in the blood stream, as the examination of a film will prove. Atoxyl possesses the same action as arsenic, but can be pushed to a much greater extent than the latter. The following scheme indicates the specific action of atoxyl on the parasites when administered to an animal suffering from trypanosomiasis.[11]

First 4 hours ...	No change.
4 to 5 hours ...	Trypanosomes swell; movements diminish.
7 hours	Movements slow; protoplasm in irregularly disposed granules, with ground-glass appearance and vacuolated. Shape of parasites deformed, but their number not greatly decreased.
8 hours	Sudden diminution in number, from 40 in a field to 3.
18 hours	Absolute disappearance; centrifugalised blood shows no parasites. A great increase of leucocytes.

There is a disease in horses, known as dourine, confined to Algiers and North America, due to the trypanosoma equiperdum, as discovered by Rouget in 1894. The symptoms consist of inflammation of the genitals, œdema of the abdomen, eruptions, and inflamed glands. Wasting, anæmia, and paralysis follow. It has been clearly proved by experiments that the introduction of atoxyl into the blood absolutely prevents the development of the disease in susceptible animals as a result of inoculation.[12]

The reports of Robert Koch and others on the treatment of sleeping sickness by atoxyl are distinctly encouraging. In a recent report he records a trial of this drug in 986 cases of the mild and severe varieties. In the former class he included those patients who complained of impaired movement of the legs with pains therein and had swollen glands which contained the trypanosome. In the latter variety were included those who exhibited tremors, unsteady gait, going on to complete helplessness. After atoxyl injections the weakness gave way to increased power and very many of the patients were again able to walk about. Some desperate cases even lost their drowsiness, consciousness returned, and they improved so much as to walk about without assistance. So far authorities do not allow themselves to put their trust in atoxyl to effect a cure, but its therapeutical activity in that direction is undoubted.

There seems to be every prospect that this drug will acquire a permanent and very valuable position in the pharmacopœia. It should therefore be pointed out that idiosyncrasy to this drug may exist. A case is recorded of an adult who suffered from amaurosis, œdema of skin, and hyperkeratosis after the continued injection of atoxyl,[13] but it is not clear whether the aniline may not have been concerned with the production of this untoward effect. Those who have had most experience of the use of atoxyl state that the only unpleasant results they have noted were dragging pains in the extremities, which, however, were quite evanescent.

Brondesbury, N.W.

[6] Wiener Medicinische Wochenschrift, 1903, No. 17.
[7] Orvosi Hetilap, July 19th, 1903.
Berliner Klinische Wochenschrift, 1902, No. 13.
[8] Therapeutisches Monatsheft, August, 1903.
[9] Ibid., April, 1903.
[10] Brit. Med. Jour., May 27th, 1905.
[11] Deutsche Medicinische Wochenschrift, 1907, No. 4.
[12] Münchener Medicinische Wochenschrift, 1905, No. 22.

THE BALNEOLOGICAL TREATMENT OF URINARY DISEASES.

BY DR. OSCAR KRAUS.

THE last few years have seen a notable change in the ideas dominating the field of balneology as well as in the domain of medicine in general. This is due to the fact that our views of physiological processes have been changing, that we are no longer prone to consider the human body as a chemical laboratory, pure and simple, that, on the contrary, we are now taking proper account of other non-chemical biological processes. As a result our views on the mechanism of the healing process and the indications for bath treatment and particularly on the "specificity" of the curative agents have become correspondingly clearer and more rational.

Purely external conditions assign to balneotherapy a field of action peculiarly its own. The patients whom a physician sees in the city are, as a rule, either bedridden or well enough to attend to their business. The physician at a mineral spring, however, has to do with a third class of patients—viz., with such as are not bedridden but nevertheless do not need to attend to professional duties and can and will therefore devote the whole work of the day to the treatment of the maladies. It is at once apparent from this that results may be attained on general hygienic principles—entirely apart from any therapeutic power of the various waters themselves—results, however, which are fundamentally a part of the particular province of balneotherapy in the broader sense.

There are, generally speaking, few affections, especially chronic ones, which will not be benefited by a rational dietetic and climatic general treatment of longer or shorter duration. But of particular value, at any rate for certain diseases, must be the profound influence upon certain phases of the metabolic process, such as the digestion and urinary functions, which may be brought about by so powerful a medication as, e.g., the Carlsbad mineral water.

In giving the following report out of my 18 years' experience in treating urinary cases in Carlsbad I do so primarily because the matter is of paramount professional interest to

me and because I believe that in this chapter of therapeutics there remain many questions yet to be answered, many errors yet to be set right. The first of these questions is fundamental: whether, in reality, for patients with a diseased urinary apparatus there is a need for a balneological course of treatment or not? The answer is found in the practice of every day: such patients are, as a matter of fact, sent to the baths, therefore, there must be a felt need of that kind of treatment. The question only remains, whether we may expect such treatment to benefit our patients and, if so, to what degree? I do not wish to be misunderstood; the mere fact the patients visit the baths is in itself certainly no proof of the necessity of bath treatment; the triteness of the phrase "fashionable watering-place" is sufficient testimony to that. But when genuine invalids, such as patients with urinary diseases really are, are sent to a watering-place the conscientious physician must not only feel the need but also be convinced of the expediency of this treatment. If asked what are the indications in such cases for balneological treatment we may give a fairly general answer. Those patients should as a rule be sent whose progress at home is not as satisfactory as might be desired, whether the aim be a complete recovery through influence on the metabolism in general or by local treatment of the urinary organs in particular, or whether in the case of incurable processes one expects an ameliorating effect both on general condition and on particular disease symptoms through the specific healing properties of the mineral-water in question and the general benefit of the *régime*—or whether finally the processes to be combated are in reality those of a generally disordered metabolism and only happen to make themselves evident through the urinary system, as in the case of renal calculus, diabetes mellitus, diabetes insipidus, &c.

It is hardly necessary here to go into the specific properties of the Carlsbad thermal waters; others have discussed them for centuries before us. The properties of Carlsbad waters are beyond controversy which justify their use more especially in diseases of the urinary apparatus. These mineral waters have a favourable influence on the functions of all mucous membranes, especially of those of the bladder and bowel, and they stimulate intestinal and renal activity to a marked degree. We will bear these points in mind, they furnish a starting-point for our inquiries.

It is far from my present purpose to go into the pathology of urinary diseases, I wish only to speak of a certain few factors which have impressed their importance upon me in my practice. As is well known, the diseases of the urinary apparatus may be broadly divided into two groups, the one where local and the other where general symptoms play the chief rôle. The majority of the local affections have an infective origin, while a toxic character prevails in the other group. As I am to confine myself to purely clinical observations I may be allowed to make use of this purely clinical classification.

Of first importance is the question: How do the diseases of the kidney fare at Carlsbad, what is our experience with them there? We will speak, to begin with, of acute and subacute diffuse nephritis. Of late years we have been seeing them more frequently at Carlsbad, and, I must add, have been glad to see them. I at least have had a favourable experience with them. Without further remarks I will give the following case as an example.

An English lawyer, aged 42 years, consulted me in the summer of 1902. Within the year he had been having hæmorrhage from the kidneys, which had lasted with remissions until he came to Carlsbad. Rather in consideration of pain in the left kidney region, of the fact that his father had once undergone an operation for stone, of the sedentary life of the patient, and of the scanty uric acid excretion said to be present, than of any typical course of the disease, a probable diagnosis of nephrolithiasis had been made. To be sure, the possibility had been left open by his conscientious adviser of a hæmorrhage "from another cause." I have mentioned here the nationality of the patient with a reason. It is well-known that England was the starting-point of the movement which defends most emphatically a diagnostico-therapeutic incision of the renal capsule. At the annual meeting of the British Medical Association at Cheltenham surgeons expressed themselves in favour of such an incision in just such cases as the one here cited. If a stone is found it is removed; if not, the after-effects of the operation, due, as is said, to a "relief of kidney tension," are beneficial, and the pain and the hæmorrhage are said always to disappear. This effect would be comparable to that of an operation for glaucoma. However, the more recent views as to the harmlessness and the favourable after-effects of the operation are by no means so unmixed, and Barth's word of warning with regard to diagnostic nephrotomy at the Berlin Chirurgical Congress in 1900 seems to have found response both in England and on the continent. The two well-known surgeons whom this patient had consulted had spoken of operation as a last resort but were quite agreed in sending him to Carlsbad to begin with. When I saw him first he had a continual dull pain in the left kidney region. The left kidney was tender to pressure. There had been no attacks of colicky pain. In the urine was a layer of blood sediment of a finger's breadth but no clot. The treatment ordered consisted of drinking the waters and heat applications (mud packs) to the kidney region. In a few days the sediment (i.e., the hæmorrhage) had become so scanty that one could recognise, besides the erythrocytes, characteristic blood casts and kidney epithelium. The quantity of albumin was greater than that to be explained by the blood present. Further, in the course of treatment the pain and hæmorrhage disappeared completely. There was never any trace of uric acid and never any trace of pus in the urine. Other points which were in favour of the diagnosis of nephritis need not be here enumerated (as a matter of fact the case was probably one of the post-scarlatinal form), but I wish merely to throw some light on those aspects of the case which were of weight as regards treatment. How are we to explain the cessation of the pain and the hæmorrhage?[1] It is generally accepted that the pain in diffuse nephritis is due to an over-stretching of the capsule from enlargement of the kidney. The diuretic action of Carlsbad water has been so freely discussed by Sandberg, Ewald, Jaworsky, London, &c., that I may properly assume that it is generally familiar. Now Leube recommends the administration of large quantities of alkaline carbonated waters in the early stage of nephritis; and when we remember that Aufrecht regards an occlusion of the tubules of Henle as the cause of the anuria, the mode of action of a diuretic mineral water becomes obvious. As Fürbringer first suggested for infective nephritis the micro-organisms themselves do not seem to be the cause of the kidney injury; this injury seems rather to be attributable to a product of the metabolism of the pathogenic bacteria, to a poison which is excreted through the kidneys. It may be assumed that a diuretic mineral water favours the excretion of the toxins, dilutes them, and so diminishes their harmful action, explaining in this way the favourable results which follow the use of such waters.

The increased diuresis certainly favoured the cessation of the renal hæmorrhage in this case, as in many similar ones that I have seen. The first necessity for hæmostasis is always the elimination, the "flushing-out" of coagula—a process without which the contractile elements in the pelvis or the calices cannot act properly. For example, in checking a hæmorrhage from the bladder the bladder must first be washed clean from clots, these being removed by whatever expedient is necessary, even to aspiration with an evacuator. It is plain that the diuresis works in a similar way upon the kidney.

We learned in school that in case of hæmorrhage, whether of the kidney or elsewhere, the bleeding organ is to be kept at rest and the vaso-constrictors are to be stimulated by cold applications. It will be remembered that I had ordered hot applications, thus departing seriously from traditions. Moreover, the patient in question had by no means kept his bed; he had taken no violent exercise to be sure, but he had taken walks and thus failed to "keep the kidney quiet." Nevertheless, the hitherto refractory hæmorrhage ceased in this as in very many similar cases immediately the treatment was begun. It is not to be assumed that this was a mere coincidence but that the warm compresses first soothed pain, then dilated the urinary passages, opening an unimpeded outlet for the increased diuresis, and that in this manner, as explained above, the elimination of the coagula took place.

I can also record similar results in prostatic cases. Of course, the mechanism is here rather different. We know that the bleeding in prostatic hypertrophy usually comes on at the height of one of the recurrent attacks of congestion

[1] I wish to emphasise that the causal connexion between the commencement of treatment and the cessation of the hæmorrhage was striking. In spite of the usual measures the hæmorrhage had continued unabated for weeks before the Carlsbad treatment was begun

and is usually accompanied by disturbances of circulation in the deeper pelvic organs. Moreover, the increased bowel activity and the flushing out of the urinary apparatus act here as a depletive. Reference cannot too often be made to the very intimate reciprocal relations between intestine and urinary tract; it is a result of their contiguity, of their common blood- and lymph-supply, and in part common nerve-supply and musculature. We will neglect the controversial question as to the penetration of the bladder wall by the colon bacillus; be it only said that we never see so strikingly the defervescent action of a laxative in an acute attack of fever as after operations on the urinary passages or in affections of this apparatus.

Turning again to nephritis, or rather to the different affections grouped under the name Bright's disease, we have to admit that we are as little able to cure them completely by balneotherapy as we are by any other measures. I hope no one will expect such results of us. On the other hand, the balneotherapeutic treatment is particularly well fitted to combat certain *symptoms* with success. In those cases where the quantity of urine is low we see a rapid rise. We shall return to this point again. As to the behaviour of the albumin and formed elements in the urine I am not able to make a detailed report before completing certain experiments now in hand, which I shall reserve for a future communication. I may say, however, that my experiences on the point have been encouraging.

We should lay particular weight on the behaviour of that group of symptoms which Bouchard has called symptoms of *chronic uræmia*. These are the remoter or general symptoms which we have mentioned earlier as the result of toxic influences. Such are gastric and intestinal disturbances, anorexia, profuse diarrhœa or chronic constipation, hemicrania, hiccough, as well as certain forms of paroxysmal frequency of micturition, or "pollakiuria," a term introduced in medicine by Dieulafoy, phenomena which from their whole nature are to be regarded as toxic. These are favourably affected by every stimulation of renal or intestinal secretory activity. This fact will be especially emphasised if we remember that Biedl and Kraus were able to demonstrate the elimination of various bacteria through the kidney, such as the bacillus coli, staphylococcus, &c., and that they could facilitate this elimination by stimulating the flow of urine. (This is also naturally of importance with regard to certain infective varieties of nephritis. Indeed, we observed in such acute cases rapidly successful results with no other medication than large quantities of mineral water to induce diuresis.) These patients improve notably at Carlsbad, recover appetite and regularity of the bowels, gain in weight, and lose the distressing headaches; their complexion improves—that characteristic toxic complexion—and good humour returns. The physician forgets too often that patients who cannot be cured need and will demand treatment. They are the ones who are most thankful for relief from distressing symptoms, and so much the more thankful if, like most nephritics, they are unaware of the seriousness of their condition and regard the remoter symptoms as the most important or as the whole disease itself.

And so I have more or less defined the goal which balneological treatment has in view for nephritis. My experience has been that compensated heart lesion, even œdema if of a slight degree, are not contra-indications for Carlsbad treatment provided that it is carried out carefully and in the right way. On the other hand, patients with ascites—and, strangely enough, they keep coming to Carlsbad as a last resort—are quite miserable there, as might be expected, and their medical men have to get them home again for their pains. I remember two such cases where I was compelled to tap the abdomen soon after arrival.

Nephritis with serious circulatory derangements (hypertrophy and dilatation of the ventricles) with considerable œdema had better not be sent to Carlsbad, not even *solatii causâ*, because the heart-pump is too sorely taxed by the increased amount of fluid taken, as well as by the walks, especially the climbing, which patients at a resort will indulge in, in spite of the doctor's advice. I should like to add another consideration. Nephritics catch cold easily, therefore they should be sent to a place which is subject to so sudden temperature changes as Carlsbad only at the most favourable season of the year. I have had some rather unpleasant experiences in this connexion.

As to *renal tumours*, there is nothing to be said except that we occasionally see them in Carlsbad after hæmorrhages, when they have been taken for stone in the kidney. They are, of course, sent at once to the surgeon as soon as the diagnosis is made.

Without wishing to go further into the question of pyelonephritis, pyonephrosis, and other such forms of infection, we must speak of *pyelitis*. This is sometimes due to calculus formation, the pyelitis calculosa, or may be of the ascending variety, the cysto-pyelitis. The treatment of the first depends on that of the nephrolithiasis. The treatment of the second must not only consist in flushing out the infected urinary apparatus by the "drinking cure" and helping in the elimination of the toxins, but must be directed as well against the various local conditions in bladder, ureters, and prostate. Every case of pyelitis is sooner or later sent to Carlsbad and one may say, without being too sanguine, that a beneficial effect of the water cure is evident not only in those forms of pyelitis where the removal of the causal factor is possible (pyelitis calculosa, certain forms of cysto-pyelitis) but even in the incurable forms as well. Whether the infection is purely of colon type, or whether it is mixed with proteus, staphylococcus or streptococcus, the increased diuresis and the elimination of the toxins through intestine and kidney seem to play a definite part in bringing about recovery. For many years alkaline waters have been used "to dissolve the concretion and to mitigate the inflammation." We shall presently discuss whether it is possible or not to dissolve the concretion, but the healing effect of the alkalies upon the inflamed pelvic mucous membrane is, at any rate, most apparent in Carlsbad.

We come now to the discussion of *nephrolithiasis*. Among the laity the opinion still prevails that Carlsbad water is able actually to dissolve kidney- or bladder-stones. Strange to say, this opinion has also crept into professional literature without meeting criticism. It is recorded in a Carlsbad publication by Dr. Springsfeld of the year 1756, "*Commentatio de prærogativa Thermarum Carolinensium in dissolvendo calculo vesicæ præ aqua calcis vivæ*," that a kidney-stone of almost two and a half ounces (i.e., about 87 grammes) in weight was dissolved in six days "entirely to a pap, like fine, soft chalk," in sprudelwater.[2] Springsfeld's other data are all as inexact as that mentioned and give no indication as to the chemical constitution of the stone thus softened. However, we once took the trouble to make a similar test with a urate stone of about the size of a hazel-nut, obtained through the kindness of the late Professor von Dittel. It was a calculus removed, with several others, by a *sectio alta*. We put it into a vessel and for 24 hours let Carlsbad water flow in and out, the whole being maintained at body temperature on a water-bath. The concretion remained unchanged, a loss of weight of only a few milligrammes being appreciable, such as was to be explained by the mechanical breaking and floating off of superficial particles. This experiment proves that uratic stones are not even dissolved *in vitro*; any attempt at a solution of them by the injection of Carlsbad water into the bladder, as has been proposed by some, must therefore *a priori* be condemned as hopeless.

That a solution of calculi in the bladder cannot be brought about by *drinking* the water need only be pointed out to the laity, among whom this superstition still prevails. On the other hand, experience teaches us that concretions both of the kidney or its pelvis and of the bladder may be driven out by the drinking-cure here. The increased diuresis resulting from the latter is beyond question and to this chiefly is to be ascribed the discharge of the stones.

The question, when can Carlsbad treatment promise a success and when ought surgery to assert its rights will be considered in the sequel.

(To be continued.)

[2] Cited by Hlavacek, Carlsbad, twelfth edition.

WEST LONDON POST-GRADUATE COLLEGE.—The inaugural lecture of the summer session will be delivered by Major Leonard Rogers, I.M.S., on Monday, May 13th, at 5 P.M. The title of the lecture is "The Clinical Diagnosis of Fevers in the Tropics," illustrated by lantern slides. Anyone interested who would like to attend will have a card of admission sent on application to Mr. L. A. Bidwell at the West London Hospital.

TWO CASES OF SNAKE-BITE, WITH A SUGGESTION FOR TREATMENT.

BY WALTER H. HAW, B.A., M.R.C.S. ENG., L.S.A.

ON Nov. 23rd, 1906, I was sent for to see a native girl, aged about 16 years, alleged to have been bitten on the outer surface of the foot at 5 P.M. on the previous evening by a small snake a few inches long. It was described as having a comparatively large head and is well known to the residents here as a "dik-kop adder" (thick-head adder) or "spring-adder," on account of its jumping propensities, I suppose, when irritated. Apparently the snake is the "horned viper," or hornsman, but none of the several who had seen it mentioned the presence of horns above the eyes. The animal had been killed, cut open, and the raw surface applied to the wounds after these had been scarified and a ligature applied above the ankle. The girl, after having been bitten, ran at once back to the house and was naturally terribly scared. As far as I could make out no symptoms occurred until about 8 P.M., when vomiting and dimness of vision came on, as well as drowsiness, which increased and necessitated her being kept awake all night. I saw her first at about 12 o'clock mid-day on the following day. She was lying on a pallet in a dark hut, surrounded as usual in serious illness by all her friends and relatives. She was on her right side and the eyes were closed. I am sorry that I am not able to give a more detailed account of the condition of the nervous system, but, of course, my chief attention was directed to what proved to be hopeless attempts to save life. What I have to say was rapidly noted in the course of the treatment.

On the outer side of the left foot, below and in front of the outer malleolus, were the marks of scarifications which had bled. As these had been made through the punctures made by the fangs the latter were not visible, but the farmer who had taken the chief part in the "first aid" informed me that there had been three punctures, suggesting that she had been bitten twice. These were in a single row and had bled. The whole foot was swollen, but I saw no discolouration of skin, ecchymosis, or necrosis of tissue in the region of the bite. A ligature was tightly bound round the leg above the ankle. The leg above this ligature was also swollen and there was a second ligature round the leg below the knee. Above this ligature nothing abnormal was noted externally. The patient lay apparently asleep but could be roused on being shouted at by name and would answer shortly. On being asked if she had pain anywhere, the answer was, "No; only in the leg." If asked to turn over the attempt would be made but without success. The arms and legs could be moved and apparently tactile sensation was not gone from the face, for spasmodic and abortive attempts were made to brush away the flies which had settled on the face and lips. Being asked to put out the tongue the mouth was opened but the tongue did not protrude. There was no objection to the prick of the hypodermic needle in the injured foot, some pain was evidently felt on inserting the needle below the right scapula, and decided struggling occurred on inserting it below the right breast. The breathing was shallow, with marked expiratory phase (not counted), and the pulse was full and strong (also not counted). The respirations were, I should judge, from 20 to 24, and the pulse would be about 90. There was no marked salivation. The eyes were closed and were not opened in response to a request to do so. The upper eyelids were swollen and presented a pinkish-blue discolouration. The colour of the face was not much changed beyond some pallor, which deepened just before death. There had been no hæmorrhages. On lifting the eyelids the eyeballs were fixed and staring with dilated pupils, which did not react to the little light in the chamber. No attempt was made to test the ocular muscles or the optic nerve, but the impression which the position and look of the eyeballs gave me was that both paralysis and blindness were present. On one occasion the father of the girl lifted her into a sitting position, when it was noticed that the muscles supporting the head were paralysed, the latter falling about like a flail and having to be supported. I thought, also, that the breathing became more embarrassed while the patient was in the sitting position. When a teaspoonful of a mixture containing strychnine was placed in the mouth it was discovered that the power of swallowing was lost, so that the face had to be turned downwards to allow the fluid to run out, for it threatened the larynx. These abortive attempts to swallow appeared to throw the breathing into greater difficulties and shortly afterwards I noticed that the breathing was going to stop, so I tried artificial respiration for some time but in spite of this it steadily and rapidly grew shallower until it ceased altogether. At the moment that the breathing proper finally ceased (what followed were only the final gasps of death) I felt the pulse to be then beating strongly but it slowly grew weaker in spite of the attempts to keep it going by artificial respiration and ceased from five to ten minutes (exact time not taken) after the last respiratory effort, which actually drew air into the lungs. Just before the breathing ceased flatus was passed by the anus. The symptoms observed conformed to those described as resulting from the injection into animals of colubrine venom.

A more fortunate issue attended the treatment of another case of snake-bite which occurred in my practice two years previously and of which I give a *résumé*.

On Dec. 14th, 1904, two natives walked into my surgery, one of them stating that his mate had been bitten on the foot a few hours previously by a night adder. The wounds had been cut into, so that no punctures were visible. Being workers on the railway being built here they were some distance from the village when the accident occurred, but they did not lose much time in coming for help. The man bitten complained of nothing but some dimness of vision and he did not appear to be much concerned about the matter. There was no swelling or discolouration round the alleged seat of wound beyond the general swelling of the foot due to a ligature above the ankle and he seemed, with the exception of the slight dimness of sight, to be in full possession of his faculties, both mental and physical, so much so that I was rather sceptical about his having been bitten, although I am aware that natives are no "slouches" in the matter of snake-bite and seldom or never accuse themselves falsely of having been bitten. The snake had been killed but had not been brought in to me. I injected a solution of permanganate of potash round the alleged seat of the bite, left the ligature, which had been tightly applied above the ankle, in position, and gave him a mixture containing liquor strychninæ, ten minims for a dose. They would not stay in the village, but went home to their huts on the railway line. Two days after, on Dec. 16th, 1904, the same two natives walked into my surgery, and on this occasion the one was leading the other, who had his eyes closed, and held his head high in efforts to see under the upper lids. On being asked to open his eyes he made an attempt to do so, but ended by lifting the lids with his fingers. He was therefore suffering from ptosis of both upper lids. On examining the eyeballs themselves I found both pupils widely dilated and the globes fixed and staring, with no action either to light or to accommodation. There was no blindness, for he could count fingers at the distance of a few paces, and no apparent loss of sensation. On testing the musculature of the eyeballs I found that on looking to the right the right eye moved well towards the outer canthus, while the left remained looking straight forward. Similarly on looking towards the left the left eye moved well towards the outer canthus, while the right remained looking straight forward. No movement either upwards or downwards could be obtained. On testing all the other cranial nerves in order, as well as the spinal nerves, nothing abnormal was elicited. Apparently, all sensation was normal. There was therefore a complete paralysis of both third nerves on the third day after the bite of a night adder. I repeated his strychnine mixture and did not see him again, but was informed that he recovered later. He was not taking belladonna and I got no history that he had taken any native herb which might cause such paralysis. His intellect was quite calm and clear.

With regard to the treatment of snake-bite, I am unaware whether the suggestion I am about to offer has been previously made, but as it seems to me to be in accordance with the dictates of common sense I give it for what it may be worth. I have had no opportunity of trying it, but I shall do so on the first occasion. The great difficulty in the treatment of snake-bite is to keep the venom out of the circulation. If this could be effectually done until such time as the venom is destroyed it may be possible to save more lives than is now being done. The usual method of preventing the venom entering the circulation is by means of the ligature and one is advised to slacken it occasionally to

allow of the poison being worked off in small non-lethal doses. It seems to me that if the circulation be brought to a standstill *at the seat of injection* it might be possible, if this be done early enough, to prevent any venom at all entering. The venom would be imprisoned, as it were, and could be dealt with by permanganate of potash and incisions. I suggest, therefore, that in cases seen early enough the part be frozen with ethyl chloride spray during the making of the incisions and the rubbing in of permanganate of potash. Where the subcutaneous cellular tissue is loose the part containing the imprisoned poison might be shut off from the general circulation by ligature should needles and thread be handy. All the operations would be painless. A tube of ethyl chloride would not be a large addition to a snake-bite outfit.

Knysna, Cape Colony.

A CASE OF POISONING BY COAL-GAS.

BY JOHN REID, M.D. ABERD.

THE patient in the present case was a female child, born on Feb. 20th. When I saw her and her mother on that day I called attention to a slight escape of gas from a bracket in the centre of the room. This bracket was not in use but was tied to the ceiling. On the 21st neither the mother nor the child seemed to suffer from the escaping gas. The room was large and a good fire was burning. On March 8th the child could not suck and had the usual signs of capillary bronchitis. She was in the kitchen, which was somewhat draughty. On the 9th she was removed to the room in which she was born but which had been out of use for a day or two. The change took place after my midday visit, at which I found that marked improvement had occurred in her lung symptoms and that she was able to suck. On the 10th I found very few râles on auscultation, but her lips were chocolate coloured and she was rolling her tongue in the mouth as if gasping for breath. She offered no resistance to examining her throat or to depressing the tongue; on the contrary, there was marked apathy. The eyelids were puffed and a thick mucus exuded from the edges of the swollen lids. The conjunctiva was red on the 8th and was so on this date, but the cornea had the dull lustre found in interstitial keratitis. The pupil was small; the general aspect of the face was ashy; the mouth was dry; and on the tongue there was thick mucus, but no saliva. The mucus seemed to be pushed out of the mouth by the rolling movements of the tongue and to reaccumulate. There was cyanosis of the soft palate, which was of the same colour as the lips. The abdomen was tympanitic and when it was pressed the child showed some signs of uneasiness. She was constipated but the bowels had been well opened on the 9th. She was placed suitably for fresh air and was fed by milk given with a spoon. On the 11th the skin of the body had a dusky or ashy hue. The bowels had been moved by a piece of soap in the rectum and the tympanic appearance had subsided. The eyelids were now open and there was no mucus on the lids—probably a boric acid lotion had removed it—but the cornea and conjunctiva were injected and the dull look suggesting keratitis was still present. The lips were chocolate coloured and the soft palate was cyanosed. There was a slight improvement in the movements of the tongue, but there still was thick mucus in the mouth. The child took milk readily from a spoon. On the 12th there was a bright roseolar rash over the whole body, including the head. A few sudamina were present, but there were large rosy red patches over great parts of the surface. A magnifying glass showed that the condition was a dermatitis or bleeding under the skin rather than a proper eruption. The colour was bright red. The tongue was now bright red, intolerant of touch, and covered with aphthæ. It was difficult to feed the child but she took milk which was given to her. The chocolate colour of the lips and the cyanosis of the soft palate were now less marked. The condition of the cornea was unchanged. The lungs gave no signs of disease, but only of dryness of the tubes. The motions were black (melæna).

The child's state on March 13th was about the same as on the 12th but the soft palate and lips were now red and showed no chocolate colour. On the 14th her state in the morning was much the same as on the 13th, but towards the evening the rash and aphthæ had pretty well disappeared. She took milk which was given her. The injection of the cornea had passed off but the dull lustreless appearance remained. There were frequent fits of difficult breathing with cyanosis during the day. On the 15th the child looked almost moribund in the morning, but improved with the inhalation described subsequently. There were frequent fits with chocolate colouring of the lips and palate. From the 12th to the 14th there was occasional yawning. It should be mentioned that these fits were not like those met with in fevers and lung affections. There was a semi-comatose state with a chocolate colouring of the lips, which passed off after a time, especially on rousing. In the evening the cornea became more natural and the child's general appearance improved. After the rash had disappeared, in the morning a few bright red patches made their appearance on the fingers; these alone were seen. Her general appearance was more natural, her bowels acted, and the motions were now natural. She was spoon-fed with mother's milk. On the 16th in the morning she had a convulsive seizure, a general convulsion of an epileptic nature, with foaming at the mouth but with little cyanosis. She had been fed during the night and the milk had been returned curdled. Jelly and trypsinised milk were now substituted and retained. At 6 P.M. the child looked natural; she had had no fits but her heart's action was weak. She died from syncope at 7.50 P.M. Marked hypostatic lividity was observed 16 hours after death and a roseolar raised eruption, of a dull character, was at the same time present over the body but not on the head; it was, however, much less copious than during life.

The mother's milk, which ceased on the 10th, was brought back on the 12th by pilocarpine, and on the 16th she had lost all the cyanotic signs from her lips. Evidently the first symptoms of carbon monoxide poisoning were paralysis of the salivary, lacteal, and lacrymal glands, with headache in the case of the mother, and stimulation of mucous glands, or glands of organic life. The fit which the child had on the morning of the 16th was, I think, owing to enfeebled circulation and was not of the carbon monoxide type. The milk had been returned from the stomach curdled.

The treatment up to March 14th consisted of fresh air, appropriate diet, and calomel to move the bowels, and boric acid lotion to bathe the eyes and tongue, with medicines likely to improve secretion. On the 14th, inhalation of chlorine was commenced, the process employed being to mix 10 grains of potassium chlorate with 30 minims of dilute hydrochloric acid in a teacup which was placed near the child's nose until evident signs of irritation occurred. This was frequently repeated during the day. Two minims of these were also added to a two-ounce mixture, of which one-sixteenth part was taken every three hours. It will be observed that the remedy was used late in the case of a very young child, and that no steps were taken to minimise the effects of the release of considerable quantities of carbon dioxide by the chlorine, which formed carbon oxychloride. Probably a more leisurely action employed at an earlier stage would be a safer remedy unless oxygen were available for inhalation, as it was not in this case. I should state that I first used dilute phosphoric acid and potassium chlorate in the mixture, but I think that little or no chlorine resulted from this. The mother recovered rapidly under the treatment. It is rather strange that a dusky or earthy colour at first covered the body. This, I think, was hæmorrhage or pigment of a punctate character. The bright red colour (rash) did not appear till the third day.

Although the antidote was used in the case of a very young subject, debilitated by broncho-pneumonia and tonsillitis (influenza), I feel confident that early and judicious treatment by the chlorine antidote would have led to recovery. As it was death resulted from syncope. It is noteworthy that the mother and child managed to live during the puerperium in the room with a leakage of gas which was repaired on March 11th. The gas became ignited and continued to burn when a lighted match was placed at the point of leakage. The accumulation of gas through the disuse of the room during two days was sufficient to produce very evident signs of poisoning. The child slept in a perambulator, with a hood, both in the kitchen and bedroom. The nursing was good. An inquest was held and the jury returned a verdict in accordance with my evidence.

Walbrook, E.C.

A CASE OF DESQUAMATIVE ERYTHEMA.

BY ATHELSTANE NOBBS, M.D. EDIN.

THE following case, which I assume was purely of the type known as erythema scarlatiniforme desquamativum, presents one or two points of interest that may be helpful not only in determining its position as a simple erythema—which has occasionally been questioned—and not a dermatitis, but also as possibly indicating, if not actually the elucidation of its etiology, at least a suggestion as to its causation.

Briefly, it occurred in the case of an old patient of mine, a man, aged 62 years, a mechanical engineer by profession. I am perfectly satisfied that syphilis could safely be eliminated in this connexion and the usual queries as to the possibility of contact with any case of scarlet fever, the incidence of toxic elements, such as fish, tinned foods, sausage, or the recent use of drugs, such as antipyrin, atropine, and so forth, elicited negative replies. The family history was good, as was also his own. Practically no cause was ascribable. During the whole illness, which lasted for about six weeks from the day when he first complained of malaise until the soles of his feet were shed practically *en masse*, there was absolutely no rise of temperature, the mercury for the most part hovering in the neighbourhood of 97° F. There was no albuminuria and no glandular enlargement, save notably a slight fulness of the thyroid, coupled with some tenderness on pressure of that organ not to be confounded with, nor mistaken for, submaxillary lymphangitis. The course of the disease was typical, the "boiled-lobster" rash speedily following the prodromal symptoms, commencing on the abdomen and then rapidly invading the rest of the trunk and eventually the extremities. Desquamation, which ensued about the eighth day, was profuse, varying in character from the consistency of powdery squamules as it fell from the trunk, neck, and limbs to scales of the saurian type such as one sees in ichthyosis. This latter condition was most marked on the forehead and the flexor surfaces of the forearm, and again on the extensor surfaces of the legs and ankles. The treatment was rest, with milk diet, then vegetarian regimen, and eventually a return to ordinary fare, and by way of a medicinal standby sodium phosphate in laxative doses. There never was any itchiness, though the patient complained of feeling as if his skin would burst, which, indeed, the dying epidermis ultimately did, and for the first week there was "tenderness" in swallowing, tobacco irritated the tongue, and there was some photophobia. As the mucosæ were involved in the general congestion of the epiblastic tissues this was only to be expected, but it is noteworthy that despite the universal vascular disturbance of the surface of practically the whole body there was no sign of cerebral irritation nor yet of the faintest degree of hyperæmia of the endothelial structures.

In such a short sketch as this it is idle to adduce a variety of arguments but the following points certainly occurred to me. Firstly, if this case was simply one of erythema, as I fully believe it was, either it should be classified as a benign exanthem, by which I mean a non-contagious one, or else as a symptom of some diseased condition, of which the primal cause is as yet undetermined. In any case I deprecate the use of a misnomer with an "itis" suffix, such as dermatitis exfoliativa, which lacks two at least of the cardinal points relating to inflammation—namely, pain and heat—though connoting them. Secondly, there seemed to my mind to be some connexion between the disturbed condition of the thyroid gland and that of the cutis most noticeable, as it was, during the desquamative process. We all know that dried horny scales of the cutis are more or less perpetually being shed whether one is ill or well; but although I know it is illogical to attempt even to argue from a special point to a general rule, I cannot divest myself of the idea that the activity of the gland alluded to was sympathetic and that it may have, and did have, an influence as much in the nature of cause as of effect and was probably more incidental than accidental. The disease, lastly, is said to be rare even in adults, but I cannot help wondering how many such find their way to the wards of the fever hospitals.

London.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

A CASE OF FEMORAL ANEURYSM; EXCISION; CURE.

(Under the care of Mr. BILTON POLLARD.)

FOR the notes of the case we are indebted to Mr. P. Maynard Heath, late surgical registrar.

A man, aged 37 years, complained of weakness and swelling of the left leg and a throbbing tumour in the left groin. The swelling in the groin first appeared in 1901. It gradually increased in size and became very painful, while the leg became swollen. About two months after the first appearance of the swelling he was admitted to the Civil Hospital, Hong-Kong, where the external iliac artery was ligatured. The pulsation in the tumour ceased for about a fortnight and then reappeared. The ligature was said to have slipped and an anæsthetic was again administered and the artery was said to have been religatured. In 1904 the aneurysm had become as troublesome as it had been originally. He had had syphilis ten years previously and had been treated for two months.

On admission to University College Hospital on Sept. 22nd, 1906, he was found to be a heavily built, well-nourished man. In the left groin was a swelling which filled Scarpa's triangle and on the surface of this just below Poupart's ligament was a prominence the size of a walnut. The latter was ill-defined above but sharply outlined elsewhere. The skin over it was normal. There was slight but definite expansile pulsation in the superficial prominence but no pulsation could be detected in the main mass of the swelling. The pulse in the artery below was weaker than on the right side and was slightly delayed. Pressure on the external iliac artery led to diminution in the pulsation of the aneurysm but it was impossible completely to control it. Immediately above Poupart's ligament was the oblique scar of the previous operation. The œdema of the leg had subsided as the result of rest in bed, but the whole of the left thigh was much bigger than its fellow. No other aneurysms could be found. The heart's impulse was very weak and a double murmur was present at the apex. The second sound was considerably accentuated. A moderate degree of arterio-sclerosis was present. On Oct. 4th continuous digital compression of the external iliac artery was carried out for eight and a half hours. No effect on the aneurysm was perceptible. On the 19th a vertical incision was made downwards from the old scar for about nine inches. The surface of the aneurysm was exposed and cleared and it was then found that the above noted prominence was a secondary dilatation of the large mass which lay more deeply. The mass was first cleared on the outer side, the anterior crural nerve being exposed and held aside. The parts surrounding the aneurysm were greatly matted together and after a prolonged dissection the deep circumflex iliac artery was found and ligatured and the external iliac artery was recognised. In the process of clearing it the deep epigastric artery was wounded. It was ligatured, the external iliac artery being secured above its point of origin. The superficial femoral artery was then exposed and ligatured below the aneurysm. Even after this stage the aneurysm still pulsated. It was then found that the femoral vein was closely incorporated with the sac of the aneurysm on the inner side. Part of the sac was therefore cut away and left attached to the vein, and the aneurysm was rapidly turned downwards and removed. Several large vessels were involved at the back of the sac but they were readily controlled by forceps. It was then found that a longitudinal wound about three-quarters of an inch in length had been made in the femoral vein. The rent was closed by a continuous suture of fine silk. Immediately below this wound a large vein, probably the profunda, entered the main vein. All divided vessels were then ligatured and the skin wound was partly closed, a drainage-tube being introduced.

The operation was prolonged. The patient's radial pulse became very irregular but was fairly forcible. The circulation in the foot of the affected limb seemed to be fairly good though the pulse in the dorsalis pedis artery could not be felt. After the operation the limb was massaged in an upward direction for a short time every hour so as to aid the venous circulation. On Oct. 20th the wound was dressed and the drainage-tube removed. The limb was a good colour and quite warm. Slight fulness was noted on the inner side of the ankle and there was some numbness present on the inner side of the leg. On the 23rd the condition of the limb was very satisfactory and the rubbing was discontinued. The wound healed readily except for necrosis of a small area of skin. The temperature reached its highest point (100·4° F.) on the 26th and fell next day to normal. The man was discharged on Nov. 9th.

The aneurysm after removal measured three and a half inches in its vertical diameter and three inches in its greatest transverse diameter. It involved the common, superficial, and deep femoral vessels. The external iliac artery above the point of origin of the deep epigastric branch was entirely occluded, as was the superficial femoral artery at the point of ligature. The deep epigastric and profunda arteries were dilated, and coming off the back of the aneurysm were three vessels, probably the external and internal circumflex and the first perforating arteries. The interior of the aneurysm was partly filled by laminated clot.

Remarks by Mr. BILTON POLLARD.—Excision is, in my opinion, the best treatment for all aneurysms situated in accessible positions and no aneurysms are more suited to that method of treatment than femoral aneurysm. With cautious dissection it is not difficult to isolate and ligature all the vessels supplying the aneurysm before they are divided. In the case now reported the aneurysm, which filled Scarpa's triangle, involved the common and superficial femoral arteries, and to some extent the deep femoral artery also. The external iliac artery had been tied some years before the patient came under my care, but pulsation returned soon after the operation; and immediately before I took charge of the case compression of the external iliac artery had been tried without success. The failure of both these methods was clearly due to the free supply of blood to the aneurysm from other vessels than the external iliac. The profunda femoris, the external and internal circumflex and the first perforating arteries all appeared to arise separately from the sac of the aneurysm and, although the external iliac artery was occluded, blood was still entering the aneurysm from the deep epigastric artery. The anterior crural nerve and its branches and the femoral vein were the only important structures endangered by the operation. The anterior crural nerve was defined just below Poupart's ligament and there was not much difficulty in separating it and its branches from the aneurysm. It was quite otherwise with the femoral vein, for it was so incorporated with the wall of the aneurysm as to be quite unrecognisable for about three inches of its course. The vein was isolated above and below, but the line of the intervening portion had to be guessed at. Whilst this part of the vein was being dissected from the sac a slit about an inch in length was made into it. The bleeding was completely controlled by a fine continuous silk suture and no further trouble resulted from the accident. The patient made a rapid recovery and when last seen six months after the operation the cure was perfect. The size of the patient's thigh was decreasing and he was no longer troubled by either weakness or swelling of the leg.

TORBAY HOSPITAL, TORQUAY.

(1) A CASE OF STRANGULATED FEMORAL HERNIA; HERNIOTOMY FOLLOWED BY RESECTION OF BOWEL AND CIRCULAR ENTERORRHAPHY; AND (2) A CASE OF FRACTURE OF THE PELVIS FROM SLIGHT VIOLENCE, WITH NIPPING OF SMALL INTESTINE BETWEEN THE FRAGMENTS CAUSING ACUTE INTESTINAL OBSTRUCTION AND GENERAL PERITONITIS.

(Under the care of Mr. GILBERT J. ARNOLD.)

CASE 1.—On Dec. 31st a woman, aged 38 years, was sent into hospital by Dr. F. T. Thistle for operation. On admission the patient stated that for some years she had noticed a small lump in the right groin which had hitherto been painless. She was quite well on the previous day until 7 P.M., when she began to experience great pain in the groin and this was followed by severe vomiting and a sleepless night. On examination there was found a small tense hernia of the size of a Tangerine orange, occupying the right femoral canal. Mr. Arnold saw her when she entered the hospital and did not employ taxis but had her prepared for operation, which was commenced one hour after admission and 19 hours from the onset of ileus. Local infiltration anæsthesia was employed, a ¼ per cent. isotonic novocaine solution containing suprarenin being used. The sac was dusky in colour and contained a loop of small intestine and a small piece of adherent omentum. The bowel was dark and congested, with loss of polish, but by no means gangrenous. The narrow tightly constricting neck of the sac was cautiously nicked with a blunt bistoury sufficiently to relieve strangulation and to enable the bowel at the seat of constriction to be drawn down and examined. Immediately this was done a slight leakage of the liquid intestinal contents was seen at the point where the bowel was compressed against the sharp edge of Gimbernat's ligament. The parts were cleansed with hot saline solution and the small necrotic opening in the softened friable bowel was invaginated and closed with a few Lembert's sutures. However, the appearance and behaviour under stimulation with hot saline solution of the involved three-inch loop of small intestine contrasted badly with the healthy bowel beyond and Mr. Arnold had no hesitation in deciding that it was unsafe to return it. The strangulated knuckle was divided through its centre and two small-sized Paul's glass tubes were tied into the open ends, the parts being carefully isolated with sterile gauze and the operation concluded by one or two sutures which served to secure the intestine and glass tubes in the wound. The patient vomited a considerable quantity of fæcal fluid during operation, but there was no shock during or after its progress. Three hours later, as the amount of intestinal drainage that had taken place through the glass tubes was small, Mr. Arnold passed into the intestine by means of a catheter and funnel some warm normal saline solution, and this was quickly followed by a free discharge from the tube in the afferent piece of bowel which was received into an attached waterproof bag.

A second operation was performed on Jan. 2nd (two days after the herniotomy), the patient having greatly improved and taken a fair amount of nourishment. Mr. Arnold removed the Paul's tubes and inserted some gauze within the open ends of the bowel, and again operating under the same local analgesia the femoral wound was enlarged into the inguinal canal by division of Poupart's ligament. The affected loop of small intestine, together with healthy bowel beyond, was then readily brought outside the abdomen and surrounded with sterile gauze. Healthy bowel was then occluded by double ligatures of rubber drainage-tube four inches on each side beyond the open ends. Its mesentery was ligated with sterile catgut and approximately eight inches of small intestine were removed. An end-to-end anastomosis was then effected by an inner row of interrupted sutures of No. 0 catgut, not including the serous coat, the sutures being tied with the knots within the lumen of the bowel and particular care being taken of the mesenteric border. An outer row of fine Lembert's sutures, using fine silk and cambric needles, completed the union, which was accomplished without narrowing. The ligatured mesentery was folded on itself and secured thus with a few stitches in order that no hole should be left at the site of the anastomosis and possibly give rise to future trouble. The bowel was returned. The divided Poupart's ligament and the femoral canal were then methodically sutured and the wound was closed round a small gauze drain. Recovery was quick, complete, and uneventful.

CASE 2.—A woman, aged 76 years, was seen on Jan. 8th, in consultation with Dr. J. U. Huxley, and immediately sent into hospital as a private patient. She had recently been through a dangerous illness under Dr. Huxley's care suffering from bronchitis and a weak heart. She had formerly worn a truss for a right femoral hernia. Two days prior to admission she was discovered by her daughter on the floor in her bedroom. The patient, who had been confined to her bedroom when the accident occurred, stated that she had tripped over the leg of a chair. There were no bruising and no evidence of injury to the femur or hip-joint. Severe abdominal pain with frequent vomiting rapidly set in. On admission the condition of the patient was extremely bad. Her thin abdomen was greatly distended and did not move with respiration. There

was a slight fulness over the right femoral canal. Vomiting of very offensive material was frequent. The pulse-rate was 120, weak, thready, and intermittent. There had occurred some slight loose actions of the bowels during the previous sleepless night. Acute intestinal obstruction was manifest and Mr. Arnold was rather of the opinion that the cause might be found in a Richter's hernia in the right crural canal. It was obvious, too, that operation under general anæsthesia entailed a great risk of death on the table. The patient, however, expressed herself as willing to face the risk of operation rather than endure further misery and acute suffering.

By means of the same local anæsthesia as was used in the previous case the old femoral hernia was rapidly explored but only a narrow empty sac communicating with the general peritoneal cavity was discovered. The abdomen was then quickly and painlessly opened in the linea alba above the pubes. Much brown turbid serum escaped and there were flakes of lymph on the deeply congested and greatly distended coils of small intestine. Next, some pale collapsed small intestine was discovered and the seat of obstruction was traced to the right side of the pelvis below the brim where the bowel was immoveably fixed. An unsuccessful attempt was then made to discover and remove the cause, but no amount of gentle manipulation with the gloved fingers sufficed to liberate the bowel, the distended coils of which were weakly agglutinated at this situation. Concluding that the case was a strangulated obturator hernia irreducible from the abdomen Mr. Arnold returned to the femoral wound and after infiltrating the deep structures superficial to the upper and outer portion of the thyroid foramen by blunt dissection through the pectineus muscle there was exposed a small dark nodule of tissue recognised as a bit of intestine lying against the horizontal ramus of the os pubis. Examination with a finger in the abdomen at the spot where the bowel was fixed revealed a rough irregularity of the bony pelvis due to fracture of the horizontal ramus near the body of the os pubis. Some force was required to separate the bony fragments and to liberate the lacerated intestine which was held as in a vice. The crushed and nearly severed piece of bowel was brought outside; its division was completed and Paul's glass tubes were tied in the ends. The pelvis was flushed out with hot saline solution and the abdominal incision was closed sufficiently to secure the bowel *in situ*. The femoral wound was closed round a gauze drain. Very offensive fæcal vomiting occurred repeatedly during this trying operation, unusually difficult owing to this unexpected traumatic fixation of the gut. Unfortunately, the patient survived barely an hour after the completion of the operation.

Remarks by Mr. ARNOLD.—These two cases were in hospital at the same time and both, I venture to think, present features of considerable interest.

Case 1 is a good example of the rapidity with which grave changes occur in the contents of a strangulated femoral hernia owing to their severe constriction at the neck of the sac. It will be noted that within 19 hours of the onset there was a virtual perforation of the bowel at the neck of the sac and the vitality of the knuckle was so impaired as to render its return unjustifiable. Even gentle taxis at this stage might have resulted disastrously. With regard to the local infiltration anæsthesia, the patient bore her second operation extremely well and felt but little inconvenience throughout the whole procedure, which was conducted without haste, extra time being of no moment. Her pulse was good and only 88 at the conclusion of the operation. At the first operation, when she was acutely ill and therefore intolerant of any manipulation, she complained of being hurt but not until after the sac had been exposed and opened.

As regards Case 2, it is remarkable that a fracture of the brim of the pelvis should have resulted from what seems a comparatively slight degree of violence in a woman who had not previously shown signs of fragilitas ossium. There was no one with her at the time of her fall. It is probable that the small intestine was caught, crushed, and fixed between the pubic fragments during their momentary separation at the time of the accident. On the other hand, the possibility of this disastrous incident having occurred shortly after the accident owing to movement taking place between the fragments cannot with certainty be excluded. Such an accident is probably of extreme rarity.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Diagnosis of Addison's Disease.

A MEETING of this society was held on April 23rd, Mr. J. WARRINGTON HAWARD, the President, being in the chair.

Dr. OTTO F. F. GRÜNBAUM read a paper on the Diagnosis of Addison's Disease. He said that the chief signs and symptoms of Addison's disease were asthenia and pigmentation, but either or both of these might be present in many other diseases and frequently the early stages were difficult of diagnosis. Some eight years ago he found that oral administration of suprarenal extract to normal individuals did not cause a rise of blood pressure. Since then evidence had accumulated to show that when a rise of pressure followed the exhibition of the drug by the mouth it indicated suprarenal inadequacy. In doubtful cases the blood pressure was determined accurately and then three-grain doses of suprarenal extract were administered thrice daily for three days. The blood pressure was again estimated and a distinct increase was very suggestive of Addison's disease provided there was no valvular lesion of the heart. Often it was possible to decide that the lesion of the adrenals was tuberculous by suitable examination of the opsonic index of the blood after inoculation with tuberculin.

Dr. H. D. ROLLESTON said that there was very great difficulty in the diagnosis of the early stages of Addison's disease and the method suggested by Dr. Grünbaum was most valuable. He knew that the administration of suprarenal extract raised the blood pressure in cases of Addison's disease, but he had not used it as a diagnostic method. The question of Addison's disease was often raised on the presence of pigmentation only and the condition of the blood pressure was a valuable aid in diagnosis. A condition of suprarenal inadequacy had been described and it would be of interest to find out whether in such cases the blood pressure was raised by the administration of suprarenal extract. In a patient who was given suprarenal extract both during and after pneumonia no rise of blood pressure occurred. He referred to the disappearance of the radial pulse in cases of Addison's disease and said that in one case he had noticed this 36 hours, and in another 48 hours, before death. Pigmentation of the mucous membrane of the mouth occurred only when there was a source of irritation as by bad teeth. The absence of pigmentation in this situation was not of importance in the diagnosis of the disease. He referred to a case in which the diagnosis of Addison's disease had been made on the presence of pigmentation alone more than 30 years ago. The man has exhibited no other symptoms and is still a strong athletic individual.

Dr. F. PARKES WEBER referred to a case in which very prolonged asthenia followed an attack of influenza. From this complete recovery took place and the patient went to India, where he contracted malaria. He then suffered from exhaustion and weakness and pigmentation of the skin was noticed. He had frequent syncopal attacks, in one of which he died. At the necropsy both suprarenals were found to be caseous and matted together across the aorta. He thought that in cases in which prolonged asthenia was present the possibility of Addison's disease should be borne in mind.

Dr. HOWARD H. TOOTH suggested that bromide sometimes gave rise to pigmentation of the skin and he asked Dr. Grünbaum whether he had met with such a case.

Dr. W. EWART said that there was great variation in the symptoms in cases of Addison's disease; in one variety asthenia was the prominent symptom, whereas in another pigmentation was the most marked character. He suggested that the variation in symptoms might depend upon the different portion of the suprarenal affected. He thought that the cases exhibiting much pigmentation were less severe than those with asthenia. He related a case in which pigmentation had existed for many years.

Dr. GRÜNBAUM said that he had never seen a case in which he could prove that pigmentation was due to bromide.

With regard to the occurrence of pigmentation, if the suprarenals were removed in animals pigmentation did not occur, but if they were damaged or infected pigmentation of the skin developed. In rapid destruction of the suprarenals, as, for example, by carcinoma, pigmentation of the skin did not take place. He referred to a case in which the solar plexus was alone involved and the pigmentation was on the trunk rather than on the peripheral portion of the limbs. The more rapid the disease the less the pigmentation.

MEDICAL SOCIETY OF LONDON.

Surgical Affections which Simulate Appendicitis.—Cases of Goitre removed under Cocaine Anæsthesia.

A MEETING of this society was held on April 22nd, Mr. C. A. BALLANCE, the President, being in the chair.

Mr. H. J. WARING read a paper on Some Surgical Affections of the Right Iliac Fossa which Simulate Appendicitis. He would, he said, restrict his remarks to the actual conditions which had come within his own personal experience. The main symptoms of all these conditions were pain in the right iliac fossa of sudden onset with nausea or vomiting. A series of cases were then narrated illustrating the following conditions which had been mistaken for acute or subacute appendicitis: (1) acute infective osteomyelitis of the ilium (acute necrosis); (2) secondary infection of tuberculous lymphatic glands in the right iliac fossa; (3) septic infection of the right broad ligament or Fallopian tube with direct extension to the right iliac fossa; (4) adeno-papilloma of the mucous membrane of the cæcum surrounding the opening of the vermiform appendix into the cæcum; (5) acute torsion of a displaced right ovary; (6) hæmatoma of the right ovary (cases of this condition had been recorded by Mr. H. W. Wilson in THE LANCET of May 26th, 1906, p. 1462); (7) hæmatoma of the right iliac fossa; and (8) intussusception of the vermiform appendix. In the diagnosis of appendicitis it was important (*a*) to ascertain the exact mode of onset; (*b*) the previous history of the patient; (*c*) to make a complete examination of the abdomen and pelvis; and (*d*) to examine the blood.—The PRESIDENT had met with instances of the first class of cases, and he instanced the case of a boy, eight years of age. He had also seen appendicitis simulated by suppuration and calcification of the lymphatic glands in the mesentery and by extra-uterine gestation. Whenever the end of the appendix was located in the pelvis considerable difficulty in diagnosis was liable to occur.—Mr ALBERT CARLESS remarked on the difficulties which might arise when appendicitis was mistaken for other morbid conditions. He narrated a case of twisting of the pedicle of an ovarian dermoid which had been mistaken for appendicitis, and referred to perityphlitis, typhlitis (without involvement of the appendix), and suppuration of the kidney as conditions in which a similar mistake might be made. The situation of the pain and tenderness was not, in his experience, of very much aid in the diagnosis.—Dr. F. DE HAVILLAND HALL referred to the case of a girl, aged 12 years, in whom a twisted ovarian pedicle was mistaken for appendicitis.—Mr. A. E. J. BARKER had met with illustrations of all but one of Mr. Waring's groups of cases. He had also met with cases of torsion of omentum, hæmatoma of the broad ligament, perforated gastric ulcer, stone in the kidney, and retrocæcal hernia simulating appendicitis.—Mr. WARING replied.

Mr. J. LYNN THOMAS communicated a paper entitled "A Series of Cases of Goitre removed under Cocaine Anæsthesia" which will be found *in extenso* at p. 1143 of the present issue of THE LANCET.—Mr. BARKER had operated upon a considerable number of these cases and all of them had been done under cocaine anæsthesia. Cocaine was almost a thing of the past. He preferred β eucaine with a slight addition of adrenalin. It was better to strap down the patient's limbs, especially in nervous patients. Professor Kocher did not apparently produce anæsthesia of the deeper parts but this could be accomplished by proper procedure and waiting a sufficiently long time after the injection before the operation. The formula used consisted of eucaine 0·02 per cent. with adrenalin 1 in 200,000, of which an average of three and a half ounces was injected. It was better to wait an hour or more till all the œdema had subsided.—Mr. THOMAS replied.

LIVERPOOL MEDICAL INSTITUTION.

Suppurative Otitis.—Extroversion of Intestinal Mucous Membrane.—Fracture of the Humerus.—Empyema.—Abnormal Conditions within the Chest Wall.

A MEETING of this society was held on April 18th, Mr. FRANK T. PAUL, the President, being in the chair.

Mr. E. M. STOCKDALE read a note on Chronic Suppurative Otitis Media, with special reference to surgical treatment, the clinical material being a series of cases which included 60 radical mastoid operations. He drew attention to the importance of skin grafting in certain circumstances and mentioned the case of a "bleeder" in which frog skin had been used with an excellent result. A case was related in which an infant, eight months old, had suffered from a discharge from the left ear for seven months. Exploration revealed the fact that almost the whole of the mastoid and petrous portions of the temporal bone were necrosed. Removal of the diseased bone brought into view an extensive surface of dura mater covered by unhealthy granulations both in the middle and posterior fossæ. A considerable portion of the lateral sinus was exposed and the internal carotid artery could be seen as it ascended to enter the skull. His experience showed that the hearing was often improved by the radical operation. His cases demonstrated that the danger of allowing the disease to run its course was much greater in every respect than the risk of even the radical operation.—Dr. W. MILLIGAN said that the great difficulty in practice was to determine the extent of the disease in the accessory cavities of the ear. An exploratory operation, followed if need be by a complete radical operation, was frequently indicated in chronic cases. He found, as Mr. Stockdale had said, that after many radical operations the hearing power was distinctly better than it had been prior to operation.

Mr. G. P. NEWBOLT showed a case of Extroversion of Intestinal Mucous Membrane after operation. The case in its original condition had been shown before the society on Oct 23rd, 1906. The abdominal wall was now completely restored with the exception of a small sinus from which a little mucus sometimes escaped.

Mr. RUSHTON PARKER read a note on Compound Fracture of the Humerus and showed a patient whose upper arm had been severely lacerated and the humerus broken transversely. Mr. Parker explained by means of lantern slides the way in which the ends of the bone had been kept in position by means of a sheet-iron twisted back-splint and two smaller lateral ones without having recourse to wiring. An excellent result had been secured. Radiographs were shown exhibiting the stages of callus formation.

Dr. W. B. WARRINGTON read notes of three cases of Empyema of an Unusual Nature. In the first patient, who was a boy aged 17 years, the empyema was latent for over a year. There were very few symptoms and spontaneous recovery followed rupture of the empyema through the lung. In the second case the empyema followed pneumonia and was limited to the upper part of the thorax. The patient had six years previously had an empyema which had been opened in the usual infra-scapular site. The third patient was a boy, aged eight years. The physical signs were unusual; they comprised extended hyper resonance, with amphoric breathing, coin sound metallic tinkling, depression and rotation of the liver. There was an area of moveable dulness in the lateral and basal regions of the right thorax. Dr. Warrington considered that the symptoms were such as could be caused by air and fluid in the pleural cavity, though evidence as to the cause of a pneumothorax was wanting.

Dr. JOHN HAY read notes of three Cases illustrating Some Points in the Diagnosis of Abnormal Conditions within the Chest Wall. The first case was one of actinomycosis of the lung simulating pulmonary tuberculosis and terminating fatally. The patient, who was a girl, aged 16 years, suffered from great dyspnœa, cough, and anæmia, and had been losing weight for six months. Her pulse-rate was 160 and there were signs of consolidation at the apex of the right lung. Three weeks later numerous abscesses had formed. Actinomycosis of the lung was diagnosed with a secondary actinomycotic pyæmia and this diagnosis was verified by subsequent examination of the pus. The second case was one of centrally placed empyema not discovered by frequent exploratory aspirations. The patient, who was a woman,

aged 35 years, was admitted into the Stanley Hospital five weeks after a difficult confinement suffering from pain in the chest, pyrexia, and cough. Ten days before admission she had a rigor and pain in her left side. Exploration of the chest gave a negative result. Later the spleen was found to be enlarged, the temperature remained elevated, and there was leucocytosis. The Widal reaction was negative. Exploration on two more occasions failed to locate pus, but finally it was found below the costal margin and the abscess was drained. The patient died the next day. The necropsy revealed an empyema in front of the root of the right lung adjacent to the pericardium. The pus had travelled down through the diaphragm and formed a subphrenic abscess. The recent delivery, the rigors, the continued high temperature, the normal position of the apex beat, the enlarged spleen, the severe anæmia, and the failure to strike pus all added to the difficulties. The third patient was a man, aged 36 years, suffering from marked dyspnœa, cough, recurring hæmoptysis, and cardio-pulmonary murmur audible at the mouth, but with slight physical signs. He had contracted syphilis when aged 27 years. He first began to suffer from lung symptoms five years ago. The x rays showed some fibrosis, especially at the root of the right lung, but the apices were clear; the right side of the diaphragm was limited in its movements. There was no history of night-sweats or of any abnormal temperature and there was no expectoration. Under treatment by mercury and potassium iodide the dyspnœa had greatly diminished, the cough had almost disappeared, and the man's weight had increased, but the cardio pulmonary murmur remained unaltered.—Dr. T. R. GLYNN referred to a case of actinomycosis apparently commencing in the lung. The patient was an elderly man whom he had seen with Dr. R. Thacker King. The early symptoms were harassing cough with expectoration of blood and sanguineous mucus; a tumour in which the ray fungus was found subsequently formed on one of his legs. The mode of infection was not discovered.—Dr. T. R. BRADSHAW, in discussing Dr. Warrington's cases, drew attention to the difficulty of distinguishing between empyema at the apex and a pulmonary abscess pointing in the same situation. He narrated the case of a man who had pneumonia of the right apex. After a week fœtor was noticed in the breath for one day. A few days later a prominence was noticed below the right clavicle and on being punctured it yielded fœtid pus. Operation showed that the abscess was in the lung and that it contained a large slough which was removed. Recovery was satisfactory.—Dr. N. P. MARSH, Sir J. BARR, Dr. R. J. M. BUCHANAN, Dr. G. A. CRACE-CALVERT, Mr. R. W. MURRAY, Mr. T. C. LITLER JONES, and the PRESIDENT also took part in the discussion.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Exhibition of Cases and Specimens.—Addison's Disease.—Cerebro-spinal Fever.

A MEETING of this section was held on April 5th, Dr. JOSEPH M. REDMOND, the President, being in the chair.

Dr. DEMPSEY exhibited a case showing Unusual Nervous Symptoms which he regarded as the result of multiple spinal sclerosis.

Dr. WILLIAM A. WINTER showed a man suffering from Aneurysm of the Thoracic Aorta. There was loss of voice owing to paralysis of the right vocal cord. There were no other physical signs except a limited area of dulness on percussion and some difficulty in deglutition. On examination with x rays a definite pulsating tumour could be seen to the left of the sternum.

Dr. ALFRED R. PARSONS read a paper on Pseudo-renal Colic. It was an account of a case which had long defied diagnosis but had ultimately been correctly diagnosed as an aortic aneurysm. The specimen was exhibited.

Dr. DEMPSEY read an account of a case of Addison's Disease of unusually short duration.

Dr. GEORGE PEACOCKE read a paper on Cerebro-spinal Fever occurring in a Child the subject of Lymphatism. The patient, who was a girl aged five years, died 11 hours after the onset of the symptoms. The chief symptom consisted in repeated attacks of convulsions. There was only slight retraction of the head. Kernig's sign was absent. There were several purpuric spots of irregular size present on the legs and arms. The necropsy revealed the presence of lymphatism characterised by enlarged and bulky thymus gland, enlarged mesenteric glands, hypertrophied Peyer's patches and solitary follicles, and prominence of the Malpighian corpuscles on section of the spleen. Cerebro-spinal fluid removed by lumbar puncture after death was turbid, the turbidity being due to leucocytes. Weichselbaum's meningococcus was found.—Dr. T. P. C. KIRKPATRICK asked if a diagnosis of the condition of lymphatism had been made before death and if there was any way by which it could be recognised. He said that the condition had been found in a number of cases in which sudden death had occurred during the administration of anæsthetics for operations and the diagnosis of lymphatism before death was a matter of practical importance.—Professor ARTHUR H. WHITE said that, in his opinion, it was possible that the condition of lymphatism was connected with the question of infection. Most of the patients who died from cerebro-spinal meningitis had had trouble with adenoids and a good deal of lymphoid tissue at the back of the nose, and it was possible that they became infected in that way. The organisms existed in some healthy people. At the back of the nose there were many kinds of diplococci, several of which were difficult to distinguish from the organism found in cerebro-spinal fever. The only case in which he had seen a necropsy made during the present outbreak had the condition which Dr. Peacocke called lymphatism.—Dr. PEACOCKE, in reply, said that the idea of lymphatism did not occur to him during the patient's life. The symptoms before death were practically *nil* and the only physical sign likely to be detected would be the presence of a very large thymus showing dulness.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held at Manchester on April 19th, Dr. E. O. Croft (Leeds), the President, being in chair.—Dr. D. Lloyd Roberts (Manchester) exhibited a Malignant Ovarian Tumour removed by abdominal section from a multiparous widow, aged 65 years. The menopause had occurred 20 years before and an abdominal swelling had been noticed for eight months. There had been no pain or loss of flesh. The physical signs were those of an ovarian cyst with ascites. On account of the enfeebled condition of the patient a preliminary paracentesis abdominis was performed followed by ovariotomy four weeks later. The opposite ovary was cystic and was therefore also removed. Recovery was uneventful. Microscopically the growth was an adeno-carcinoma.—Dr. W. E. Fothergill (Manchester) showed Compressed Swabs for Use in Abdominal Sections in Private Practice.—Dr. W. Blair Bell (Liverpool) showed a specimen of Sarcoma of the Clitoris removed from a woman, aged 56 years, 6 para, and who was nine years past the menopause. Microscopically it was shown to be a large spindle-celled sarcoma, the cells composing the tumour having large oval nuclei. There was a somewhat unusual amount of intercellular substance.—Dr. Arthur J. Wallace (Liverpool) related a case in which a large Fibroid had been Removed with the Uterus from a woman, aged 53 years. The tumour had burrowed between the layers of the left broad ligament and up beneath the peritoneum covering the posterior wall of the abdomen, and during operation the lower part of the descending colon and its sigmoid flexure had to be stripped off the growth. 40 hours after operation the patient began to have a continuous discharge from the rectum of dirty, watery, slimy fluid, very occasionally streaked with blood. All general and local remedies proved ineffective, the discharge persisting until the sixteenth day. Dr. Wallace was inclined to think that the cause of the condition was damage to the nervous supply of the colon during operation, with resulting vaso-motor paralysis and trophic disturbances in the wall of the bowel involved and sepsis within its canal. Six weeks after operation a temperature of 104° F. suddenly developed and for a week it was rarely below 100°. The patient's general condition steadily improved during this time and no cause could be discovered for the high temperature. The operation wounds had healed by first intention and there had been no return of the diarrhœa. Now, four months after the operation, the patient was in good health but she still had elevations of temperature for which there was no apparent cause.—Dr. Arnold W. W. Lea (Manchester) related a case of Bilateral

Axial Rotation of Ovarian Cysts during Pregnancy. The patient, aged 27 years, was suddenly seized with severe abdominal pain and vomiting when she was three and a half months pregnant. A tense cystic tumour occupied the right side of the abdomen and a smaller cystic mass was felt on the left side, the uterus occupying a central position. Abdominal section was performed. Both ovaries were converted into dermoid cysts, each of which had undergone acute torsion. The tumour on the left side had ruptured and the peritoneal cavity contained blood. Both tumours were removed and 15 days later miscarriage occurred spontaneously. The fœtus had evidently been dead for some days. Bilateral ovariotomy, said Dr. Lea, had now been performed during pregnancy in at least 60 cases, and it was remarkable that in the great majority the pregnancies had continued to the full term.—Dr. T. B. Grimsdale (Liverpool) communicated the case of a patient, aged 29 years, who had never menstruated, but had complained of pain in the back, which had lasted for two days each month. Her general health was good. There was no cough and no abnormal signs could be detected in the lungs. There were old healed scars in the right groin, suggesting old suppurating glands, and a depressed healed scar on the inner side of the lower part of the right thigh, suggesting old necrosis of the femur; there were also some healed scars over the right tibia. The patient could not give any account of these scars. She was well developed and apparently was a strong healthy woman. There was no abdominal tumour. The vaginal examination was made under an anæsthetic. The uterus was found to be somewhat enlarged and moveable. There was a definite elongated swelling to the left of the uterus. An endeavour to pass the sound failed; it would only pass for three-quarters of an inch. The diagnosis of malformation of the uterus with possibly some retention of blood was made. The abdomen was opened and the uterus and Fallopian tubes were removed; the vermiform appendix was adherent to the right tube, and also to the upper part of the rectum into which it had opened. Both Fallopian tubes were distended with thick pus. The uterus contained caseous pus in its cavity, which was also disseminated through its walls. The case was one of tuberculous disease of the uterus and appendages causing primary amenorrhœa.

CHELSEA CLINICAL SOCIETY.—A meeting of this society was held on April 16th, Dr. J. D. E. Mortimer, the President, being in the chair.—Dr. J. H. Dauber read a paper on Some of the Factors which Contribute to Success in Abdominal Operations. He said that in malignant cases the mortality was necessarily great; otherwise old people bore operations well. The mental condition was most important. Pessimistic remarks should always be carefully avoided and all the surroundings should be encouraging. If kept long in hospital the courage of patients was liable to evaporate and they refused to be operated on. Obviously any inflammatory condition should be allowed to subside if possible. An even temperature before, during, and after operation was most essential, and for the sake of others the patient should not be returned to the ward till the effects of the anæsthetic had passed off. The disinfection of inhalers and warmth after operation were very essential precautions. Wrapping in cotton-wool was an excellent practice. No patient should have the stomach empty for more than three and a half hours before operation. Asepsis must, of course, be absolute and preferably by the agency of heat, and all concerned must be constantly on their guard against septic loopholes. There was no object so delicate, so susceptible to septic infection, as one that had just been sterilised. Patients trusted their lives to them and it was treachery to neglect the elimination of any possible risk. A heavy-handed operator was distinctly unfavourable to a successful operation, and rapidity of operation was as important as ever it was. An operation which lasted more than an hour was always dangerous from mere lapse of time. After this period exhaustion set in and the patient was liable to sudden heart failure. Assistants should be as few as possible. The risk of sepsis increased with numbers. After operation it was essential to relieve thirst either by giving water to drink or by rectal injections. Occasional movements from side to side relieved the intolerable backache. Morphine was occasionally necessary, and purgatives or injections frequently, especially when the bowels were distended with flatulence. Much of the success of operations depended on the commissariat. Patients require tempting and coaxing when convalescing or they would collapse for want of support. To paraphrase Napoleon's well-known dictum, "A patient convalesces on his belly." Besides mending the injured part they must patiently endeavour to restore the disordered function.—Mr. J. Foster Palmer then read a paper on the Treatment of Apoplexy. There were only two methods of treatment, he said, the active and the passive. Any middle course was dangerous—fatal. As they were not yet supplied with appliances for a sufficiently accurate diagnosis to justify operative proceedings they must steadily adhere to the passive treatment. The indications, therefore, were chiefly negative, warnings against hostile dragons and venerable superstitions. Bleeding was now, perhaps, practically non-existent; but strong aperients, which were not yet extinct, were even more dangerous. Whatever the cause the patient would often go on well until an aperient was given and then he would die almost immediately. The nerves supplying the intestinal canal required rest as well as the nerves of motion, of sensation, and of special sense. It was better to leave the bowels inactive for a fortnight or more than to irritate them in the slightest degree. Blisters, too, were objectionable in a lesser degree as unnecessarily exciting the nerves of sensation. Ice to the head only drove the blood from the surface to the interior and when applied to the back of the neck increased congestion in the brain by dilating the blood-vessels. Position was all-important. Nothing was so fatal as to allow a patient to lie on his back. The powerless muscles allowed the tongue to fall back in the pharynx; the entrance of air into the lungs was hindered, stertor resulted, and apnœa followed in its train. This was generally relieved by placing the patient on his side, preferably the paralysed side, though bed-sores must be carefully watched for. Possibly in some cases the addition of oxygen to the inspired air might be of advantage. Rest was the great desideratum. Rest for the injured brain, rest for the nerves of motion and sensation, rest for the nerves controlling secretion and digestion, and rest for the nerves of special sense would include the objects chiefly aimed at in the treatment of this severe lesion. In regard to prevention the importance of calcification as a factor in arterial degeneration suggested the avoidance so far as possible of lime salts by all above middle age. Mineral waters containing lime were especially dangerous, as they also contained free carbonic acid, which rendered it more soluble. Still more dangerous were medicines containing lime salts.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A clinical meeting of this society was held on April 12th, Dr. Augustus H. Bampton being in the chair.—Dr. A. G. Barrs and Mr. H. Littlewood showed a case in which a Tumour pressing on the spinal cord at the level of the ninth dorsal vertebra, and causing complete paraplegia, was removed by laminectomy. Sensation in the limbs returned as soon as the patient regained consciousness after the operation; in a fortnight there was perfect control over the sphincters and improvement was still proceeding.—Mr. A. L. Whitehead showed a case of extensive Mastoid Disease with extradural abscess and much external pachymeningitis successfully operated upon. There had been an old-standing otorrhœa but the acute condition supervened upon an attack of influenza.—Mr. R. L. Knaggs showed a case of Duodenal Fistula in the right loin in a girl aged 17 years. In August, 1906, she had an acute attack of abdominal pain; from October, 1906, to January, 1907, she had pyrexia and induration in the right psoas region. This was opened and was thought to be a psoas abscess, until two months later food began to come through the fistula shortly after being swallowed. For various reasons the fistula was regarded as being probably of duodenal origin, an opinion concurred with by the meeting.—Mr. J. F. Dobson showed a case of Spinal Caries treated on a Bradford's wire frame for six months with much improvement.—Dr. W. H. Maxwell Telling showed two cases of Anæmia Splenica Infantum in twins; also a third case in which complete recovery had taken place. He also showed a case of Chronic Favus refractory to the ordinary treatment for ten years. It was proposed to treat it by the application of x rays.—Dr. J. Gordon Sharp showed a girl, aged five years, in whom Motor Aphasia with Left Hemiplegia developed subacutely. The patient was right-handed. In two months right hemiplegia was ushered in by a convulsion. The right side was now well but some weakness of the left side persisted.—Mr. T. H. Fox exhibited a Cretin showing marked improvement under thyroid treatment continued for three years. The case was interesting in that a particular brand of tabloids produced improvement for six months and then became inactive. A similar result was obtained with

another preparation; on reversion to the first a like result followed. This has happened throughout the case.—Dr. T. Courton showed a case of Anæmia Splenica Infantum in a child the subject of congenital syphilis. The spleen was enormously enlarged and five distinct notches could be felt in it. He also showed a case of Splenic Anæmia in a man of 30 years. The anæmia was of the secondary type; there had been three severe attacks of hæmatemesis during an 18 months' history.—Dr. E. F. Trevelyan showed a series of cases of Tabes, illustrating various typical and atypical features of the disease.—Dr. T. Wardrop Griffith showed a case of Ataxia of sudden onset and rapid progress. The disease commenced on Feb. 27th and rapidly spread to the arms, increasing in the legs. The Babinski phenomenon was present and varying areas of anæsthesia were present in the legs but there was no other abnormal sign. The case was regarded as probably one of disseminated sclerosis.—Mr. H. Collinson showed a case of Removal of Half the Tongue by Whitehead's method, three and a half years ago. The submaxillary and deep cervical glands were removed at the same time. So far there had been no recurrence.—Mr. Michael A. Teale showed a series of cases exhibiting Disorders of the Mobility of the Iris.—Mr. H. Secker Walker showed a case of Dermoid Cyst of the Eye and Supernumerary Auricles. He also showed a case of Xerosis of the Conjunctiva.—Dr. Alexander Sharp showed two cases of Tuberculous Laryngitis in the catarrhal stage.

MIDLAND MEDICAL SOCIETY.—A meeting of this society was held on April 17th, Dr. Edward Malins being in the chair.—Dr. Walter R. Jordan showed a father and two children (boy and girl) with a condition of Congenital Keratodermia affecting the Palms of the Hands exclusively. The father's father had been similarly affected. A brother of the father and a third child of the father were entirely free from the condition.—Mr. L. P. Gamgee showed a woman, aged 24 years, who for eight years had suffered from symptoms of Gastric Ulcer. She had had two attacks of hæmatemesis. The symptoms had been relieved by medical treatment but there had been a relapse each time. On July 25th, 1906, an anterior gastro-jejunostomy was done by stitching. Within half an hour of the patient's return to the ward severe hæmatemesis set in, three pints of blood being vomited within the first 24 hours after operation. This ceased and then at the end of ten days it became evident that a vicious circle had been formed, large quantities of bile-stained fluid being frequently vomited. On Oct. 20th a lateral anastomosis was done between the piece of jejunum passing up to, and that passing down from, the junction with the stomach. This resulted in cessation of the vomiting till Feb. 13th, 1907, when vomiting recurred. On March 4th the abdomen was re-opened and it was found that the jejunum, at a point just over the seat of the lateral anastomosis and at another point six inches below this, was bound down by dense adhesions. These were divided and the patient had been perfectly well ever since.—Dr. J. Douglas Stanley showed a girl, aged 12½ years, who first came under observation when ten years old on account of typical Raynaud's Disease and Rheumatoid Arthritis. At that time the joint lesion was slight. The patient was deficient in weight and stature and her mental condition was much under the average. During the two and a half years the Raynaud's disease had improved but the arthritic lesions had advanced, the hands especially showing typical characters of rheumatoid arthritis. The height and weight were now 3 feet 10½ inches and 30½ pounds. There was no evidence of enlargement of the spleen or lymph glands. Dr. Stanley discussed the possible connexion between rheumatoid arthritis, Raynaud's disease, and myxœdema.—Dr. J. G. Emanuel showed a Heart in which there was practically a Single Ventricle (the right ventricle) into which the mitral and tricuspid valves opened and from which arose the aorta anteriorly and the pulmonary artery posteriorly. Close to the opening of the aorta was a foramen which led into a small potential cavity in the wall of the ventricle, and with this cavity the aorta communicated. This therefore represented a rudimentary and functionless left ventricle and the foramen of communication between it and the right ventricle was the patent pars membranacea septi. The interauricular septum was complete. The aorta at its origin lay anterior to the pulmonary artery and externally there was but an imperfect separation of the aorta from the pulmonary artery. This malposition of the great vessels was explained by an irregular descent of the septum which should completely divide the primitive arterial bulb into aorta and pulmonary artery. All the valves were well formed; the foramen ovale was closed; the ductus arteriosus was obliterated. The specimen was from a male infant, aged 20 months, who died from thrombosis of the right pulmonary artery with multiple infarcts in the corresponding lung. During life there were no cyanosis and no clubbing. The symptoms were sudden syncopal attacks. There was no thrill but a loud systolic murmur was audible all over the præcordium.—Mr. A. W. Nuthall showed a case of Mongolian Idiocy, exhibiting typical characteristic features.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on April 19th, Dr. J. R. T. Conner, the President, being in the chair.—Dr. Alexander Morison read a paper on the Nature and Management of Hypertrophy of the Heart. He said that when the heart dealing with an obstacle in the normal and easy transmission of blood hypertrophied, in just proportion to the additional work thrown upon it, it was said to be "compensated." But such a condition of "compensation" was one of a more or less uncertain state of equilibrium between obstacle and heart power and this uncertainty was proportionate to the character of the obstacle. There were certain conditions in which the compensatory hypertrophy overstepped the limits of beneficial increase. This was, no doubt, because the degree of embarrassment in the circulation was of more than average severity. It was the cor bovinum—a heart hypertrophied in a degree beyond the average—which exemplified that degree or condition of cardiac hypertrophy which ceased to be beneficial in compensation and became from its bulk an added intrathoracic embarrassment to the circulation of the blood. The effect of excessive effort was, naturally, exhaustion, and in the production of this result several factors—hæmic, neural, and muscular—were operative. That the disabled heart, sufficiently "compensated" by the hypertrophy provoked by its condition, might efficiently do its work for lengthened periods in circumstances of considerable stress and strain was a common experience. It followed, therefore, that no more injudicious course could be taken with the patient than that of rendering him "nervous" about the condition of his "heart" or so hedging him about with restrictions as to suggest that little lay between him and dissolution. Rest of body and mind, regulation of food, and cardiac tonics were indicated, whether hæmic, neural, or muscular, or these combined, and later graduated exercises by baths, gymnastics, or walking. But as time advanced and hypertrophy increased, giving way later to dilatation, and they had a large ineffective organ pulsating in the thorax and crowding neighbouring organs directly and indirectly, the question arose whether anything else could be done to render cardiac action more easy and to relieve the patient for a longer or shorter period. They were all aware of the baneful influence upon the circulation of removeable accumulations within the chest, such as air, serum, pus, or blood, accumulations that is, which by their pressure "crowded" the heart and hampered it in its easy and free movement. They might legitimately, therefore, surmise *a priori*, that when the central organ took the initiative in congesting and encroaching upon the lungs, relief of intrathoracic pressure by costal resection might also in some cases be beneficial. Dr. Morison thought that he would be justified on the first available opportunity in putting these views to the test of experience.—Dr. David Ross showed an improved Chest-piece for Binaural Stethoscopes which he had been using for several months.—The following office-bearers were elected for the session 1907-08:—President: Dr. W. Langdon Brown. Honorary secretary: Dr. David Ross. Honorary treasurer and curator: Dr. B. G. Morison. Council: Dr. J. R. T. Conner, Dr. Leslie Durno, Mr. G. Angus Hunt, Mr. W. Campbell M'Donnell, and Dr. J. S. Risien Russell.

LARYNGOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on April 5th, the President, Dr. J. B. Ball, being in the chair.—Dr. StClair Thomson exhibited a man, aged 29 years, who had been shown at the previous meeting on account of a Malignant Endo-laryngeal Growth. Since then an operation had been performed for its removal, and a section of the growth was exhibited. As some of the members were unable to satisfy themselves that the growth was of a malignant nature it was decided to refer it to the Morbid Growths Committee for a further opinion. The interest of the case rested in the early age of the patient.—Dr. Thomson also exhibited a woman, aged 50 years, with Prolapse of the Ventricle of

Morgagni.—Dr. H. J. Davis exhibited a boy, aged 12 years, who, according to his mother's statement, had never spoken. The boy was unable to protrude the tongue. He was very intelligent and he heard and understood perfectly. He could hum songs in tune but could not speak a word (aphemia). At the age of three years, it was stated, he had right hemiplegia.—Dr. J. Donelan exhibited a patient with Destruction of the Columella of the Nose occasioned either by syphilis or by lupus. In view of there being some evidence of active disease he decided to observe the case a little longer before doing anything of a surgical nature.—Dr. J. Dundas Grant exhibited a case of Pharyngo-keratosis (mycosis) improving under application of salicylic acid in sulpho-ricinate of soda. The patient had been under this treatment for 12 months.—The President said that he had tried salicylic acid for mycosis but that he did not have much faith in the treatment.—Dr. F. de Havilland Hall commented on the way that keratosis, like warts elsewhere, would sometimes clear up in an astonishing way.—Sir Felix Semon inquired why keratosis should be treated at all locally, inasmuch as it always got well of itself. He hoped the profession would recognise that keratosis occurred when the patient was run down, and that it would disappear under a change of air and tonic treatment and that no local treatment was necessary.—Dr. Grant, in reply, expressed himself in agreement with Sir Felix Semon. He had put before the patient the fact that the appearance of the throat was of no significance, and he thought the discomfort that the patient had gone through in using the remedy was out of proportion to the result. He would not recommend the treatment in every case of the kind. —Dr. W. Jobson Horne exhibited a macroscopic specimen of Lympho-sarcoma of the Mediastinum. The growth had caused extensive obstruction, almost obliteration, of the œsophagus without any breach of the mucous membrane. The larynx presented œdema localised to the right arytenoid region; immediately below the œdema, in the fold passing down between the cartilages of Santorini and Wrisberg, was a small ulcer. The points of interest were the unusual extent of the œsophageal obstruction and also whether the localised œdema of the larynx was occasioned by local infection or was secondary to obstruction caused by the mediastinal growth.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 17th, Mr E. Powell, the President, being in the chair.—Reference was made to the death of Dr. W. H. Ransom, one of the founders of the society, and a resolution of sympathy with the members of his family was moved by the President, seconded by the President-elect, Dr. L. W. Marshall, and adopted unanimously.—Dr. M. Parry-Jones (Derby) read a paper on some cases of Pneumothorax. As far as the causes could be classified 90 per cent. were due to pulmonary tuberculosis, 8 per cent. to gangrene and acute inflammatory conditions, and only 2 per cent. to various rare causes, such as severe pleurisy, empyema, enteric fever, hydatid, or aneurysm. Pneumothorax was very rare as the result of chest injuries, even with fractured ribs or stabs. A case of pneumo-hæmothorax the result of injury without any fracture was narrated. The onset of pneumothorax was most variable and the degree of pain present, as well as the displacement of viscera, might be greatly dependent on the presence or absence of adhesions. The signs, too, might be greatly modified by the presence of fluid effusion, and in this way the tympanitic area might vary in pneumothorax, which was not the case in a large vomica. In the more severe cases death might occur rapidly from shock and exhaustion, in more favourable ones the air might be rapidly absorbed without any further complication, but, on the other hand, the pneumothorax sometimes became chronic or was accompanied by serous effusion, while the pleuritic effusion might quite overshadow the pneumothorax or even rapidly become empyema. A man, aged 28 years, was shown (by Dr. Parry-Jones) illustrating apparently complete recovery from acute pyo-pneumothorax. Pus was found within a few days of the onset and the chest promptly opened. Progress was unsatisfactory, so portions of two more ribs were removed and the wound freely opened up. The drainage seemed good, but at the upper part of the space a large opening in the lung came into view leading into a vomica, from which foul pus was discharging. A drainage-tube was therefore inserted into the lung. From this time his recovery was rapid and the lung had expanded well, while there were no abnormal sounds audible. He had gained weight, felt well, and was at work.—The paper was discussed by the President, Dr. J. H. Johnston, and Dr. F. H. Jacob.—Mr. J. C. Sale (Skegness) mentioned the case of a girl who had come under his notice where there had been 11 separate attacks of pneumothorax, and Dr. Parry-Jones replied.—Dr. Jacob read a few notes on the Treatment of Ringworm by the X rays. He showed Sabouraud's pastilles, by the aid of which epilation by one exposure was rendered safe. Reference was also made to its treatment by copper ions.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—A meeting of this society was held on April 19th, Dr. C. W. Chapman being in the chair.—Dr. Chapman read notes on two cases of Glandular Fever in a mother and child.—Dr. T. R. C. Whipham showed a girl, aged eight years, who was the daughter of alcoholic parents and had developed deafness, stuttering, stridor, transient ptosis and anæsthesia, and some atrophy of the tongue. She was hypersensitive and emotional. The diagnosis lay between neurosis and disseminated sclerosis.—Dr. Whipham also showed a girl, aged 11 years, with Adherent Pericardium and Aortic and Mitral Regurgitation, due to acute rheumatism 18 months previously.—Dr. Fletcher Beach showed a boy, aged six years, with fibrous nodules over the right eye and occiput, atrophy of the left side of the face, marked curvature of the dorsal spine, and large pigmented areas on the abdomen and back. The case was considered to be von Recklinghausen's disease.—Dr. J. Porter Parkinson showed a girl, aged two and a half years, with Right Hemiplegia and Motor Aphasia. The power of speech was gradually returning after having been completely lost for a month.—Dr. F. J. Poynton showed a case of Addison's Disease in a girl, aged nine years. She had suffered from vomiting, lassitude, and fainting attacks for a year and from pigmentation of the face for a month; there was some pigmentation of the mucous membranes and the blood pressure was only 60 millimetres of mercury, but there was no anæmia.—Mr. Duncan C. L. Fitzwilliams showed the following cases and specimens: 1. A case of Multiple Abscesses in a child nine months old. There were 27 abscesses on the head, body, and limbs; a few had burst; there was no history of syphilis. 2. A girl, aged 11 years, with Congenital Absence of the Left Arm. The bones and muscles of the shoulder girdle were well developed. There was spinal curvature due to the unbalanced weight of the right arm. 3. A Siren Fœtus with a Normal Pelvis, but a solitary lower extremity, containing a thick femur below which were two partially separated bones; the bones of the paddle-like foot were normal.—Mr. G. Pernet showed a case of Erythema Iris in a child, aged three years, due to intestinal intoxication, and a case of Erythema Papulatum Hæmorrhagicum in a girl, aged 15 years, stated to be a vegetarian.—Mr. Francis Jaffrey exhibited an infant, aged six months, with a Cartilaginous Tumour attached to the whole length of the nasal septum, blocking the left side of the nose and bleeding freely.—Dr. J. H. Tallent showed a child, aged two and a half years, with Double Retained Testes. When he was six weeks old a swelling appeared in the right groin but disappeared again in about five minutes, and this swelling had frequently been noted subsequently.

THERAPEUTICAL SOCIETY.—A meeting of this society was held on April 16th, Dr. T. E. Burton Brown, the President, being in the chair.—Dr. George Oliver read a paper upon Some Notes on the Control of Supernormal Arterial Pressure. He gave the leading results of his clinical observations on the management of a persistent rise in the arterial pressure by diet, baths, electricity, and other remedies. He indicated some practical suggestions furnished by physiology in the selection of apressor remedies for less or more continuous use and stated his further favourable experience of the benzene derivatives, at the same time showing that their control over persistent increments of arterial pressure was limited to the case in which the pressure rise was moderate and the vaso-motor play of the peripheral arteries was not seriously impaired.—Sir Lauder Brunton considered Dr. Oliver's paper very valuable. He thought that in cases of very high tension absolute rest in bed with quiet of body and mind was indispensable. With perfect rest, vegetarian diet, and the steady use of nitrites even cases of exceedingly high tension might be successfully treated. A salt-free diet might be useful in cases of very high tension, but it could not be continued for a length of time as it was so

irksome. Salt might be to a considerable extent replaced by sugar in the dietary. The modern treatment of high tension by nitrites and nitrates had been recommended by the great Bacon in the time of Elizabeth, as the two remedies he recommended for prolongation of life were nitre and blood-letting. The nitre he employed probably contained a quantity of nitrates and blood-letting was a remedy which had fallen too much into disuse and in cases of high tension might be employed again with advantage. He showed von Basch's instrument as modified by Potain for estimating blood pressure and also a combination of this instrument with Riva Rocci's armlet.—Dr. Herbert S. French reminded the society that cases of very high blood pressure occurred even amongst those who were at the same time vegetarians, non-smokers, and life-long abstainers.—Dr. Oliver, in reply, agreed that rest in bed would diminish the high blood pressure even in the worst cases, but this was owing to a diminished call upon the cardiac end of the circulation. In those who were obliged to work the ventricle factor could not be diminished and such cases seldom reacted to apressor drugs so long as they remained up and about. He thoroughly approved of the revival of venesection for such cases.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 5th, Dr. J. Walker Downie, Vice-President, being in the chair.—Dr. Albert A. Gray showed the Temporal Bones of a patient who suffered from serous catarrh of the middle ear. Both tympana were full of gelatinous pearly-grey material. The membranes were sodden but not perforated. The mucous membrane of the tympanum and antrum was softened and friable. The stapes was moveable. The exudation filled up the middle ear, antrum and mastoid cells, and attic. This case explained the frequent absence on the membrane of any line of demarcation between the lower part of the tympanum which was filled with fluid and the upper air-filled part.—Dr. H. Wright Thomson showed cases illustrating Skin Grafting in Ectropion, Symblepharon, and Rodent Ulcer. The skin flap was mapped out and rapidly removed along with the subcutaneous fat, which was afterwards removed with curved scissors. The cases were greatly benefited by the operation.—Dr. G. T. Beatson reported a case of Traumatic Asphyxia. The patient, who was a man, aged 24 years, was crushed by a pit cage, the compression being antero-posterior and the shoulders being crushed downwards and forwards. On admission to hospital two hours after the accident there was intense congestion of the head and neck, almost petechial in character but not affected by pressure. There was also considerable œdema around the eyes and mouth. There was some proptosis indicating hæmorrhage into the orbit. There was no fracture. In three days the congestion and discolouration had faded and by the eighth day were only present in the forehead and now yielded to pressure. There was discolouration around the eyes and nose as in an ecchymosis. This also soon disappeared.—Professor John Glaister referred to the importance of such cases from a medico-legal aspect and referred to some cases which had occurred by crushing in a crowd.—Dr. George H. Edington, Dr. Somerville, and Dr. A. Young referred to other cases.—Dr. Young gave a lantern demonstration illustrating a Modification of the Wolfe-Krause Method of Skin-grafting. The whole skin and fat were rapidly removed and placed in sterile saline solution. The wound was then stitched up. The raw surface was then prepared for the grafts, which were then made ready by removing the fat and cutting them into suitable pieces. A layer of protective gauze was then applied and a moist boric or saline dressing was put on. The moist dressing was changed daily but the gauze was not removed for several days.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A meeting of this society was held at 20, Hanover-square, on April 10th, Dr. Frederic Bagshawe (St. Leonards-on-Sea) being in the chair.—The adjourned discussion on "The Present Position of the Treatment of Tuberculosis in Marine Climates," which was introduced by Dr. William Ewart at Hastings on March 16th, was resumed by Dr. Alfred F. Street (Westgate-on-Sea). He said that the weight of evidence was on the side of those who contend that pulmonary catarrh is essentially microbic in origin and that it always owns a factor other than mere cold. The humidity of marine climates was usually a tolerable humidity, for humidity must always be considered in relation with temperature, the really important point being the amount of moisture which could still be absorbed before saturation was reached. The climate of the north coast of the Isle of Thanet had long been recognised for its favourable influence in cases of tuberculosis, especially those amenable to surgery, but its precise factors were not yet discovered. Cases of locally originated tuberculosis were rare there. Hæmoptysis might be relatively more frequent at the seaside than inland and there was need for abundant open-air shelter. As maintained by the opener of the discussion, the more extensive and more systematic use of our marine climates was strongly indicated.—Dr. E. Solly (Harrogate) alluded to the beneficial influence of variety of scene to all who were obliged to seek health under the necessarily restricted conditions of a sanatorium life, and in this respect a "sea view" offered advantages which no inland station could afford.—Dr. S. D. Clippingdale expressed the view that a case of phthisis in any stage of the disease did better in a bracing climate than in a relaxing one.—Dr. Leonard L. B. Williams said that it was necessary to draw distinctions between various kinds of marine climates. It depended upon the type of tuberculous person which of these climates should be recommended.—Dr. Ewart, in reply, explained that the bacilli could not be directly influenced by such slight oscillations of temperature or such moderate variations of climate as occurred within the temperate zones. But to their host these influences made all the difference. He entirely agreed with Dr. Street and other speakers as to the unequalled value of the bracing climate of Thanet, but it was liable to be too "strong" for the more advanced cases of phthisis, although invaluable in the early stage and in surgical tuberculosis.

INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on April 12th, Dr. D. S. Davies, the President, being in the chair.—Dr. J. Wright Mason read a paper upon the Inspection of Food at our Ports. He said that there was no universal method for examining imported cargoes of food-stuffs, only two authorities, those of London and Manchester, having special powers of examination vested in them. Under these powers the examination is conducted immediately upon arrival and before the food-stuffs are deposited or exposed for sale. Elsewhere food-stuffs are only examined after being landed and deposited for sale. This anomalous position would be remedied by the Public Health (Regulations as to Food) Bill now before Parliament. Dr. Mason said that, in his opinion, an inspection before being landed or before leaving the docks would not only be beneficial from a public health point of view, but would also be some guarantee to the public generally that they are being more fully protected. The power to inspect a ship's cargo consisting of food-stuffs before or when being landed would enable an inspector to satisfy himself as to whether the cargo had been stowed in a proper manner so as to avoid being damaged, or whether injury had arisen owing to the proximity of other and objectionable cargo. With regard to tinned foods Dr. Mason was strongly of opinion that they should be required to bear the name and address of the manufacturer and the date when packed. He urged the importance of providing suitable warehouse accommodation for the purpose of examining and sorting cargoes of food-stuffs of a doubtful and perishable character.—In the course of the discussion which followed the President emphasised the importance of uniformity in methods of examination at the various ports of entry, for importers would divert traffic from those ports where stringent measures were enforced.—Dr. E. W. Hope pointed out that stricter examination at the ports would not absolve inland sanitary authorities from the obligations at present placed upon them.

DERMATOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on April 10th, Dr. T. Colcott Fox being in the chair.—Dr. Wilfrid S. Fox showed a case for diagnosis. The patient was a man, aged 42 years, who had had syphilis 14 years previously. He had lived much in South America, where the disease for which he was shown had appeared about six years ago. He was now extensively covered with a small papulo-pustular eruption which was particularly marked on the back of the thighs. These lesions recalled the papulo-pustules of acne scrofulosorum and a section from one such lesion showed a cellular infiltration about the blood-vessels with numerous plasma cells, an appearance which was suggestive of tuberculosis. The general opinion was in favour of a diagnosis of tuberculides.—Dr. E. G. Graham Little showed a case for

diagnosis, the patient being a lady who had lived in China for 11 years and during the past year had developed a pigmented eruption upon the neck, arms, legs, and abdomen. There was no history of any preceding eruption; there were no subjective symptoms except moderate itching; the mucous membranes were not involved. No swellings or alterations in the nerve trunks could be detected. It was considered impossible to come to any decision as to the character of the eruption in its present condition.—Dr. Colcott Fox showed a case of Lupus Vulgaris dating from an attack of measles at the age of two years. The patient was a boy now aged ten years and he had recently developed a follicular eruption, which the exhibitor was inclined to regard as a miliary tuberculide of the nature of lichen scrofulosorum.—Dr. H. G. Adamson showed a child with a Reddened Shiny Soft Congenital Tumour of the size of half-a-crown. In some respects this resembled a lymphangioma, but the consensus of opinion favoured the diagnosis of soft mole.

MEDICO-LEGAL SOCIETY.—A meeting of this society was held on April 16th and was devoted to toxicology. Mr. Walter Schröder presided.—Professor H. Harvey Littlejohn described three cases of Fatal Poisoning by Strychnine, including the recent "Cumnock shortbread poisoning case." It appeared that in each of the cases consciousness was present during the convulsions. Professor Littlejohn also described a Fatal Case of Poisoning by Potassium Bichromate. The necropsy was performed six hours after death while the blood was unreduced and contained met-hæmoglobin which gave the skin the characteristic hue.—Dr. W. H. Willcox, Dr. W. Scott Tebb, and Dr. S. B. Atkinson discussed these cases.—Dr. Scott Tebb described a Fatal Case of Poisoning by Oxalic Acid, and gave a short historical account of the use of this poison.—The next meeting will be held on June 18th, when Dr. C. H. Wise will give a paper on Facts and Opinions in Medical Practice, and Dr. Willcox will describe a Case of Gunshot Wounds (illustrated by specimens).

MANCHESTER CLINICAL SOCIETY.—A meeting of this society was held on April 16th, Dr. J. F. Le Page, the President, being in the chair.—Dr. G. H. Lancashire read a paper on Tuberculous Skin Affections. The common bacillary types of disease were described, especial attention being paid to lupus vulgaris and its treatment. It was pointed out that there was still considerable scope for caustic methods of treatment in lupus, amongst the best caustics for this purpose being a saturated solution of zinc chloride, of pyrogallol or of potassium permanganate. The last Dr. Lancashire employed in the form of powder, which was packed into holes made in the nodules by means of a wooden skewer, the powder being afterwards moistened. In this way several nodules could be treated at a sitting, a local anæsthetic being preferably used. Diseases of the so-called toxi-tuberculides type were also described and a case shown which was held to be a papulo-necrotic toxi-tuberculide.

Reviews and Notices of Books.

The Prophylaxis and Treatment of Internal Diseases. By F. FORCHHEIMER, M.D., Professor of Theory and Practice of Medicine and Clinical Medicine, Medical College of Ohio, Department of Medicine of the University of Cincinnati; Physician to the Good Samaritan Hospital. London: Sidney Appleton. 1906. Pp. 652. Price 21*s.* net.

THIS work is designed for the use of practitioners and of advanced students of medicine and the author has carried out his task with success, embodying in his remarks the results of 30 years' experience in hospital and private practice. In dealing with the treatment of the various diseases he mentions those methods first which he himself has found most serviceable, subsequently describing other measures recommended by accepted authorities. The directions suggested for prophylaxis are such as can be readily carried out in private practice and the most modern therapeutic systems of all kinds are fully considered. Thus much space is devoted to hydrotherapy, gymnastics, exercises, and diet, always with a view to their adaptation to private patients. When the requirements are so expensive or elaborate as to necessitate a special establishment certain resorts are suggested where such can be satisfactorily obtained. Surgical methods are referred to mainly from the point of view of the physician and unless there is some special object for so doing no reference is made to the technique of operations. We have perused the work with much pleasure and have found Dr. Forchheimer's recommendations and suggestions fully trustworthy and up to date.

In describing the treatment of typhoid fever hydrotherapeutic measures naturally take first place, for in America the employment of baths is more common than in this country. Brand's method, a combination of baths and massage, has yielded excellent results. The advantages claimed are that the course of the disease is shortened, the nervous symptoms are controlled, the circulation is improved, the condition of the mucous membranes is changed for the better, and lastly, the mortality is diminished. We are not aware that a full trial has been given to this method in England, but it would be interesting to ascertain whether the results of such a course would compare favourably with the means now generally adopted. The remarks on the prophylaxis of tuberculosis are well worthy of attention. Dr. Forchheimer lays stress on the importance of popular teaching in the fight against the disease. This tuition must be given lucidly, for, as he says (and we are entirely in accord with him), much harm may be done to the tuberculous individual if the chances of prevention of the disease are not stated clearly and forcibly. We quote the author's own words: "Fear is best controlled by knowledge, and our knowledge of tuberculosis is positive as to its prevention. The danger in the popular conception is exaggeration, which in this case makes a leper of the patient, destroys his utility, and frequently deprives a whole family of its natural supporter." This argument has been strongly urged against the proposals for compulsory notification, and in our opinion is a weighty one and needs careful consideration before mandatory legal measures are generally adopted.

The author's views on the treatment of pleurisy with effusion differ somewhat from those which are usually held by English physicians. He maintains that when effusion is the result of primary pleurisy paracentesis is always indicated. "It matters not," he says, "whether the level of the fluid reaches the top of the first or the fifth rib; whether the patient is in immediate danger or not." He refers to the fact that the older clinicians laid down the rule that there should be no operation when fever was present. Dr. Forchheimer then remarks: "When there is great dyspnœa or the fluid collects very rapidly so that there is danger of suffocation, the operation should be done at once; otherwise the subsidence of inflammatory symptoms may be waited for; but even here I aspirate early, whether the effusion is large or small, my own experience having taught me that aspiration when a patient has fever is not followed by a re-accumulation of fluid. On the contrary, more frequently aspiration acts in the same way as would the opening of an abscess; the fluid disappears and the fever with it." These remarks are interesting and worthy of full consideration. There is a tendency on the part of some practitioners to postpone operation as long as possible in the hope that the fluid will be reabsorbed. The author deprecates this course of action. He considers that the early removal of fluid prevents the formation of adhesions. The importance of attempting to prevent adhesions is obvious, as they play an important rôle in the production of bronchiectasis, chronic pneumonia, and deformities of the chest. If early withdrawal of the fluid will tend to prevent such sequelæ then certainly it should be adopted. Dr. Forchheimer also very rightly lays stress on the necessity of regulating the

after-treatment of cases of pleurisy with effusion as a large proportion of them have been proved to be tuberculous in origin.

The part of the work dealing with the treatment of diseases of the nervous system (especially the section on epilepsy) will also be found instructive, while the whole book teems with information and practical hints most suggestive for actual practice. The form in which the work is written also adds to its value as rendering it suitable for reference and we can therefore recommend it as a desirable addition to the library for constant use.

Rome as a Winter Resort. By A. G. WELSFORD, M.D. Cantab. With Introduction by G. SANDISON BROCK, M.D. Edin. Rome: 1907.

SINCE Sir James Clark, some 90 years ago, wrote a special treatise on the subject "Rome as a Winter Resort" has evoked from physicians of various nationalities a series of vindications on the lines of that well-known book—all of them coming to the same conclusion epigrammatically driven home by Dr. Gsell-Fels a generation ago: "Als Winteraufenthalt könnte Rom besser verwerthet werden, *wenn es nicht Rom wäre.*" It is not the climate itself, still less, in these days, the defective sanitation, that makes the Eternal City dangerous to the visitor, but the imprudences of which the said visitor is guilty in his enthusiastic exploration of catacombs, ruins ancient and mediæval, museums, galleries, and other claimants on his time, his attention, and (let us add) on his physical endurance. If in these days of "raw haste" and "condensed hurry" the visitor could be persuaded to do his sight-seeing leisurely the risks he incurs by a sojourn in Rome would be less than in almost any other European capital, but with such temptations addressed to the ecstatic tripper as "Rome in Ten Days" or even "A Month in Rome" it is to be feared that "candidates" for one or another of the ailments to which all flesh is heir will never be wanting even in "this so-called twentieth century." Gregory XVI. in the audiences he gave to the visitor from abroad used to ask how long he had been in Rome, and when told that he had been "all the winter" would smile and say, "A rivederla," or "Au revoir," or "Auf wiedersehn." But when the answer was "for a few weeks" he would sigh and say, "Addio," or "Adieu," or "Lebe wohl," with a significance which appealed not more to the artist or the historian than to the medical man.

Dr. Welsford makes an effective contribution to the literature of what may be called "Roman apologetics," and in the little volume before us subjects to a thorough and cogent review the claims of the city, in point of climate and of health conditions, to be a permanent place of abode or a temporary resort for the invalid. With the advantage of "coming last" in the long line of similar treatises he is able to strengthen his "apologia" with the latest statistics as well as with the most approved and accepted findings of research—meteorological, sanitary, bacteriological, and clinical—and adduces evidence enough to warrant Dr. Sandison Brock in his hope that it will "dissipate once for all the prejudices and misapprehensions which still deter the traveller from a pilgrimage to the Eternal City." The articles on Temperature, on Relative Humidity, on Barometric Pressure, on Rainfall, and on the Prevailing Winds are compiled from the most authoritative sources, private as well as official, the only section on which we could have wished more detailed handling being that of the water-supply, in supplement to the special report of Professor Cannizzaro and his colleagues dealt with in THE LANCET some 22 years ago.[1] That supply still remains unrivalled for purity and abundance, but since the recent multiplication of dwelling-houses the courtyard fountains from which it "shook its loosened silver in the sun" has been too often replaced by the domestic reservoir or cistern where it is liable to be contaminated with the effluvia or sordes of the overcrowded tenement. Significant in this connexion is the fact, put on record by the Roman physicians of the last generation, that typhoid fever was absolutely unknown in the Rome of those days, and that the clinical student who wished to familiarise himself with its etiology, its pathology, and its response to treatment had to go to other centres of population. *Au reste*, we would draw attention to the article on Malaria as eminently reassuring in its presentation of the risks incurred from that disease. "There are no malarial foci within the walls," concludes Dr. Welsford sententiously. As to that other "hereditary *spauracchio*" (scarecrow), the sirocco, which has been well defined as "heat without sun, wind without air, and rain without freshness," Dr. Welsford gives it the *coup de grâce*, adding: "It blows only 15 days in the year." A parting word as to the illustrations. These are taken from the photographs of Mr. Anderson, on whom has worthily fallen the mantle of Robert Macpherson, who, some "sixty years since," was the first to apply the photographer's art to the reproduction and presentation of the many archæological and artistic treasures of Rome.

[1] THE LANCET, Dec. 20th, 1884.

Ueber Augenerkrankungen sexuellen Ursprunges bei Frauen. (*Diseases of the Eye of Sexual Origin in Women.*) By Dr. EMIL BERGER, Foreign Corresponding Member of the Royal Belgian and Royal Spanish Academies of Medicine; and Dr. ROBERT LOEWY, Chief Assistant of the University Gynæcological Clinic in Paris. German revised edition, translated by Dr. BEATRICE ROSSBACH, Physician for Diseases of Women in Madison, U.S.A. Wiesbaden: J. F. Bergmann. 1906. Pp. 171. Price 4 marks.

SUBJECTS on the border-line of two branches of medicine are liable to receive scant attention, falling, as it were, between two stools. Such monographs as the present therefore serve a useful purpose. It is written by an ophthalmologist and a gynæcologist, a combination which prevents many errors which might result from a one-sided view of the question. In it are collected most of the cases recorded in literature of disease of the eye caused by, or associated with, diseases peculiar to women. As a bibliographical work alone it is of great utility to the ophthalmologist, and in less degree to the gynæcologist, but its usefulness is enhanced by the well-balanced comments and hypotheses of the authors.

After a short historical introduction the book deals in sequence with diseases of the eye reported as occurring during normal menstruation, at puberty, with dysmenorrhœa and suppression of menses, at the climacteric, associated with diseases of the genital organs, during pregnancy, parturition, lying-in, and lactation. Septic affections of the eye secondary to diseases of the sexual organs and abnormalities of vision following uterine hæmorrhage are fully discussed. A chapter is devoted to the deleterious effects of parturition, spontaneous or artificially aided, upon the eyes of the infant and to the infectious purulent inflammations of the conjunctiva in the newly born.

A review of the literature, such as is presented here, brings into prominence the frequency with which both simple and obscure affections of the eye are attributed to physiological and pathological conditions of the female sexual organs, often upon quite insufficient grounds. Menstruation and pregnancy, with its concomitants, parturition and lactation, are physiological processes, whilst dysmenorrhœa and suppression of menses are common complaints, rarely attended with disorders of the ocular apparatus. There is need for the exercise of great care in attributing an

etiological agency to these conditions and in this respect the authors rightly assume a conservative attitude. Nevertheless, in the present relations of civilised life, physiological functions are carried out in a highly artificial environment and are liable to react adversely upon a debilitated organism. The authors have wisely interpolated a chapter upon the theory of menstruation and have described briefly the little which is known or conjectured about the effects of the process upon the blood and upon the general system. The facts elicited tend to support the view that suppression of the normal function causes an auto-intoxication which may induce ocular complications under suitable conditions. We have seen a case of thrombosis of the central vein of the retina in a girl whose sole constitutional defect was a temporary suppression of menses and the association of iridocyclitis with disorders of the sexual apparatus in women is well established. It may be hoped that in the future further researches will be carried out upon the condition of the blood during menstruation and other physiological and pathological states of the sexual organs. There is little doubt that profound changes exist, having important bearings not only upon ophthalmology but upon other branches of medicine.

LIBRARY TABLE.

The Royal London Ophthalmic Hospital Reports. Edited by WILLIAM LANG, F.R.C.S. Eng. Vol. XVII. Part 1. London: J. and A. Churchill.—The present number commences a new volume of these old-established reports. It fully sustains the high reputation which they have gained in the past. Mr. E. Nettleship continues his extremely interesting and valuable researches on the influence of heredity in ocular disease. His paper deals with so-called retinitis pigmentosa and allied diseases. He has collected some astonishing pedigrees from his own experience and from the writings of others. His graphic method of representing his results, familiarised to readers of the reports by his previous papers on cataract, shows the salient points of each pedigree at a glance. Mr. Nettleship rivals Sherlock Holmes in his skill and perseverance in tracking down individual suspects. In his case of retinitis pigmentosa seven generations, including 200 persons, have been traced, with the discovery of 38 members affected by the disease. The paper is one of importance not only to ophthalmologists, who are not likely to overlook any work of this distinguished clinician, but also to those interested in the problems of heredity, for the evidence derived from disease may well be found to play a decisive rôle in the controversy of the rival theories. The paper will be concluded in the ensuing number of the reports. Mr. J. B. Lawford, walking in the footsteps of his sometime colleague at St. Thomas's Hospital, records examples of hereditary primary glaucoma. In one pedigree four generations have been traced, three showing members, five in all, affected with the disease. Mr. George Coats writes upon the Pathology of Macular Holes and an Unusual Form of Cyst of the Iris. Both papers are illustrated by excellent microphotographs. The first is an exhaustive discussion of a condition which can only rarely be elucidated by microscopical examination. The wealth of material which the Royal London Ophthalmic Hospital supplies has provided the curator of the museum with four cases for his valuable investigation. Mr. E. E. Henderson and Miss Janet E. Lane-Claypon report a Study of the Ciliary Epithelium after Puncture of the Anterior Chamber. The paper deals with an experimental and histological investigation of certain points in connexion with the secretion of the intra-ocular lymph, a subject which the first author has previously studied with Professor Starling. Mr. W. Ilbert Hancock has furnished a thoughtful communication on Head Nodding and Nystagmus. His observations on spasmus nutans are of great interest; his criticisms of prevalent theories of the disease are chiefly destructive. He rightly distinguishes these cases rigidly from those of congenital head-nodding which are also associated with nystagmus but which do not undergo spontaneous resolution. Dr. T. Harrison Butler discourses upon the Clinical Features, Bacteriology, and Treatment of Acute Ophthalmia in the East, giving an analysis of 5700 cases observed whilst occupying the post of assistant surgeon to the British Ophthalmic Hospital at Jerusalem. We welcome this contribution to the literature of ophthalmology from this noble charity. The author's pathological results are somewhat revolutionary from the standpoint of western investigations and we shall await the confirmation of his experience of the incidence of the various organisms of acute ophthalmia with interest.

Lateral Curvature of the Spine and Pelvic Deviations. By RICHARD BARWELL, F.R.C.S. Eng., Consulting Surgeon, Charing Cross Hospital; Surgeon, Cripples' Home. Sixth edition. London: Baillière, Tindall, and Cox. 1905. Pp. 103. Price 3*s.* net.—We have reviewed with approbation early issues of this work, but this sixth edition deserves especial notice, as for it the book has been entirely rewritten. The chief idea embodied in this edition is that the starting-point of the greater number of cases of lateral curvature of the spine is an obliquity of the pelvis and as a corollary it must necessarily follow that treatment to be effective should be directed, not merely to the secondarily affected spinal column but to the primary pelvic obliquity. In the chapter on Certain Prevalent Methods of Treatment the author discusses the therapeutic means usually employed and he shows that they may fail to achieve what is desired. The greater part of the book is devoted to treatment, and the methods advocated are described sufficiently fully to enable an estimate to be formed of their value. We are in accord with very much of what the author maintains and we think that he has given a very lucid account in this little book of the great importance of pelvic deviations in the production of lateral curvature. The treatise must prove helpful to anyone anxious to understand fully the production and treatment of these deformities.

The World's Classics. Volume LXI. *The Autocrat of the Breakfast Table.* By OLIVER WENDELL HOLMES. Oxford University Press: Henry Frowde. Pp. 271. Price 1*s.*—In our issue of April 6th, in reviewing certain volumes of "The World's Classics," we said that the sight of "The Professor at the Breakfast Table" and "The Poet at the Breakfast Table" made us hope that a future number of "The World's Classics" would be "The Autocrat of the Breakfast Table." We now learn that this particular volume was issued quite early in the series and Mr. Frowde has kindly sent us a copy. There is no need at this time to praise these delightful essays, to say nothing of such possessions for ever as "The Chambered Nautilus," "The Living Temple," "The Wonderful One-Hoss Shay," and "Contentment," poems which shine like jewels in the setting of the prose.

Photographic Atlas of the Diseases of the Skin. In four volumes. A series of 96 Plates, comprising nearly 200 illustrations with descriptive text and a treatise on Cutaneous Therapeutics. By GEORGE HENRY FOX, A.M., M.D., Professor of Dermatology, College of Physicians and Surgeons, New York; Consulting Dermatologist to the Department of Health, New York City; Physician to the New York Skin and Cancer Hospital, &c. Vol. IV. London and Philadelphia. Pp. 62 and 24 plates. Price 25*s.* net each volume.—This is the concluding volume of the present issue of Dr. G. H. Fox's atlas. He is one of the most energetic dermatologists in bringing out atlases of diseases of the skin and they have all been excellent. The use of photography in the portrayal of skin diseases has its limitations, but these

illustrations are practically as good as photographs can be. The treatise on treatment is likely to prove useful; it is moderate in tone. Sometimes the author appears to us to be unnecessarily pessimistic in regard to the efficacy of treatment.

The World Machine: First Phase, the Cosmic Mechanism. By CARL SNYDER. London: Longmans, Green, and Co. Pp. 468. Price 9*s.* net.—The author of this work might well quail before his subject, which is no less than the epitomising in this volume and two others to follow of the whole plan, physical, cosmical, and social, of the universe. We will first express a hope that the ending of his labours will lead him to a less lugubrious conclusion than is contained in the five lines of undiluted Nietzsche that front this volume, but in spite of this the stupendous issues involved are set forth, so far as they have been revealed by science, in a way that may be understanded of the people. A medical journal cannot fully review a survey of astronomical history, but we may say that the work is informed with a thorough knowledge of how from Ptolemaic darkness and through Copernican dawn at length the Newtonian day grew bright, a transition that finds an adequate biological parallel in the sun of Listerian methods that so much later in the world's history dissipated the murky gloom of the surgery of laudable pus. It is an interesting reflection on the rapid transitions of modern science that within so few decades of the apparent shattering of the walls of the doctrine of spontaneous generation by Pasteur's trumpet-blast, such a book as this can more than hint at the possibility of their being again set up.

The Psychic Riddle. By ISAAC K. FUNK, D.D., LL.D. London and New York: Funk and Wagnalls Co. 1907. Pp. 243. Price $1 net.—Another plea from America for the dispassionate consideration of the claims of spiritualism. Dr. Funk's present solution of his riddle is thus summed up: "That intelligences who are foreign to us, that is, who reside beyond our five senses, can and do communicate through the physical sense organs with some of those who are living in the flesh." However, he denies the complete confession of spiritualism, which, says he, includes this further article: "That these intelligences can and do identify themselves as those who once lived in the flesh." To the acceptance of this doctrine, we are told, there remain some very formidable difficulties. Exactly, and a perusal of the "phenomena" set down in these pages appreciably advances its disproof, as especially witness the tricksy "spirit" of Theodore Parker, which, manifesting itself to the learned doctor through different mediums, always had a different tale to tell! We must credit the author, however, with a recognition of frequent fraud in "spiritualism," although the tone of his work indicates a strong sympathy with many of its conclusions, and we need hardly state that the opinions of Lodge and Lombroso are called in evidence for the thesis. The book ends with a string of aphoristic dark sayings, of which this may serve for type, "Those who do not love death do not know it."

A Treatise on Materia Medica and Therapeutics. By RAKHALDAS GHOSH, L.M.S. Cal. Edited by C. P. LUKIS, M.D. Lond., F.R.C.S. Eng., Lieutenant-Colonel I.M.S. Third edition. Calcutta: Hilton and Co. Pp. 737. Price Rs. 5, or 7*s.* 6*d.*—The appearance of a further edition of this excellent manual justifies the good opinion expressed in THE LANCET when it was first issued in complete form in 1904. The late author had an extensive knowledge of his subject and the task of editing the work has been very ably carried out by Lieutenant-Colonel Lukis. We note that our former suggestion as to the value of volatile ethers in alcoholic stimulants has been included in this edition, and in the next we hope to see a repetition of the warning against prescribing alkaloids with bromides and iodides given under the heading of the latter drugs as well as under the general list of incompatibles, which omission we previously suggested should be corrected. The work as a whole is excellently arranged, and the sections on pharmacology and therapeutics will be useful to practitioner as well as student.

Lessons on Massage. By MARGARET D. PALMER. Third edition. Illustrated. London: Baillière, Tindall, and Cox. Pp. xvi.-272. Price 7*s.* 6*d.* net.—We congratulate Miss Palmer on the appearance of a third edition of her work which bids fair to become a standard text-book on massage. Of course no text-book can replace practical work, and he or she who would become an adept in effleurage, tapotement, and the rest must rely on practice above all things, for the best book can only be an adjuvant of limited use. It is in the chapters on bones and muscles that the student will find his chief help. The authoress could not have hit upon a happier motto for her work than the Hippocratic aphorism, which she quotes: "Rubbing can bind a joint that is too loose and loosen a joint that is too rigid." In this edition the sections on certain deformities have been revised and are now thoroughly trustworthy.

JOURNALS AND MAGAZINES.

The Edinburgh Medical Journal.—In an article in the April number of this journal Dr. F. W. N. Haultain makes a clinical and anatomical study of 30 cases of cervical fibroids removed by abdominal hysterectomy. The symptoms caused by these growths are more severe than those resulting from corporeal fibroids and the results of operation are less favourable. Dr. R. T. Williamson writes on Progressive Muscular Atrophy and Amyotrophic Lateral Sclerosis, which he considers to be distinct affections, and Dr. Dawson F. D. Turner recommends examination of the respective electrical conductivities of the blood and urine as a test of the functional efficiency of the kidneys. Dr. F. Parkes Weber records a case of polyneuritis in which great gastro-intestinal dilatation occurred, probably due to implication of the pneumogastric nerves.

The Bristol Medico-Chirurgical Journal.—The March number of this magazine opens with an interesting article by Dr. P. H. Pye-Smith on Prognosis, containing many shrewd reflections and aphorisms relating to a variety of diseases. Dr. D. S. Davies and Dr. I. Walker Hall write on Cerebro-spinal Fever (Meningitis), basing their remarks on cases admitted to the Bristol Royal Infirmary since 1901, and Dr. P. Watson Williams writes on the Treatment of Deflections and Deviations of the Nasal Septum. Dr. A. Lewin Sheppard discusses Acquired Angioma of the Liver, with notes of a case; and two cases of Ruptured Intestine ending in recovery and one of Splenomegalic Cirrhosis in a child, aged seven years (a final note), are recorded respectively by Mr. Harold F. Mole and by Dr. Edward Cecil Williams.

The Dublin Journal of Medical Science.—The two numbers of this journal now before us—those for March and April—are above the average in the variety and interest of their original articles. The former contains a series of papers on Gastric Ulcer, which are chiefly of importance as illustrating the views of their writers—Dr. James Little, Sir Charles Ball, Dr. J. A. Lindsay, and Mr. Arthur B. Mitchell—as to the advisability of surgical interference. The first-named writer records that in recent years several patients have consulted him for stomachs which gave great trouble and that among the principal signs he was obliged to mention a "scar five inches long" in the linea alba. The April number opens with a first instalment of an exhaustive account of "Our Debt to Ireland in the Study of the Circulation," with a voluminous bibliography, by Dr. G. A. Gibson. Dr. Frank C. Purser discusses current theories of Aphasia, alluding especially to Marie's doubts as to the reality of the connexion

between lesion of Broca's area and this affection; and Mr. J. C. Pretorius writes on Colour Vision, propounding the hypothesis that the different colours of the spectrum stimulate sections of individual "cones" lying at different depths in the retina, corresponding with the focal lengths of these colours as they pass through the lens.

ERRATUM.—In our notice of Professor Ainsworth Davis's biography of the late Professor Huxley we inadvertently described the volume as belonging to the series of "English Men of Letters"; it belongs to the series of "English Men of Science" published by Messrs. J. M. Dent and Co.

Reports and Analytical Records FROM THE LANCET LABORATORY.

(1) ALAXA; AND (2) QUININE ACETYL-SALICYLATE.

(MESSRS. BURROUGHS, WELLCOME, AND CO., SNOW HILL BUILDINGS, LONDON, E.C.)

1. ALAXA is a pleasant liqueur containing cascara sagrada in combination with certain stomachic and carminative principles. It is free from griping or irritating action and is suggested, in particular, as a useful tonic laxative during pregnancy. Each fluid drachm contains the equivalent of 24 minims of the liquid official extract of cascara sagrada. 2. The advantage of quinine acetyl-salicylate over ordinary quinine salicylate is that in the former case the acetyl-salicylic acid set free in the stomach passes on unchanged, causing no gastric disturbance. In the case of quinine salicylate, salicylic acid, on the other hand, is liberated, which is a gastric irritant. Aceto-salicylic acid dissolves in the alkaline contents of the intestine. Quinine acetyl-salicylate is of value in the treatment of febrile conditions.

SPARKLING CLOS DES CORDELIERS.

(MESSRS. G. DE MEYNOT AND CO., ST. EMILION; AGENTS, EDWARD ARCHER AND CO., MALVERN.)

We can quite accept the statement in regard to this excellent wine that the same careful attention is paid to it as in the production of the more renowned sparkling wine, champagne. It possesses excellent bouquet and flavour and, in short, exhibits many of those attractive qualities which distinguish a good champagne. The wine is grown at St. Emilion, a district which is famous for producing a wine of claret style but which, generally speaking, possesses greater body than claret, thus approaching the character of burgundy in this respect. This fact no doubt contributes to the success of St. Emilion as a sparkling wine, for it exhibits the rich quality of a sound champagne. The following analysis reveals its composition, which shows no appreciable difference from that of champagne itself: alcohol, by weight 10·85 per cent., by volume 13·43 per cent., equal to proof spirit 23·54 per cent.; extractives, 4·17 per cent.; mineral matter, 0·12 per cent.; sugar, 3·00 per cent.; glycerine, 0·348 per cent.; tannin, 0·114 per cent.; volatile acidity reckoned as acetic acid, 0·13 per cent.; and fixed acidity reckoned as tartaric acid, 0·57 per cent. The wine is described as "first growth St. Emilion, carte Noire extra dry vintage, 1895," and the price is 48*s.* per dozen.

LIQUID SOMATOSE.

(THE BAYER CO., LIMITED, 19, ST. DUNSTAN'S-HILL, LONDON, E.C.)

Previously we have referred to somatose in the form of powder. For those who prefer this powerful food in a fluid form liquid somatose, both sweetened and unsweetened, has been introduced. According to our analysis the preparation contains nearly a fourth its weight of solid matter and approximately 70 per cent. of this consists of the soluble proteose. It is, of course, a powerful nutrient.

MOSTELLE GRAPE JUICE.

(THE GRAPE JUICE COMPANY, LIMITED, 4, FURNIVAL-STREET, LONDON, E.C.)

We have not examined better specimens of grape juice than those recently submitted to us by the above firm. They possess the luscious flavour of the grape, whilst exhibiting also a pleasant acidulous taste. They are perfectly free from antiseptics, the method of preservation being simply that of pasteurisation. The red colour of the red juice proved to be identical with the colouring matter of the black grape. The composition of the red juice proved to be as follows: extractives, 26·65 per cent.; grape sugar, 24·08 per cent.; mineral matter, 0·25 per cent.; and acidity, reckoned as tartaric acid, 0·68 per cent. The white juice gave the following results: extractives, 26·97 per cent.; grape sugar, 25·64 per cent.; mineral matter, 0·27 per cent.; and acidity, reckoned as tartaric acid, 0·50 per cent. Both specimens, which were made from Spanish grapes, contained the merest trace of alcohol, which, of course, it is hardly possible to avoid; the amount was certainly less than two-fifths per cent. by volume. Grape juice when diluted with aerated water affords a refreshing and wholesome beverage. It may also be used when a grape diet is prescribed and particularly when there is a difficulty in obtaining the fresh fruit.

STERILISED LUBRICANT.

(MESSRS. S. MAW, SON, AND SONS, 7 TO 12, ALDERSGATE-STREET, LONDON, E.C.)

The lubricant is semi-transparent and is contained in a collapsible tube provided with a mouth which is concave in shape, a device which is intended to prevent soiling the fingers with the contents and which also secures uniform lubrication. The lubricant is simple in composition and free from irritants. It is designed for use with catheters, instruments, or for lubricating the hands. The tube contains sufficient lubricant for one day's use when the catheter is employed three times during that period.

EFFERVESCENT PIPERAZINE (MIDY).

(L. MIDY, PARIS. AGENTS: THE ANGLO-AMERICAN PHARMACEUTICAL COMPANY, LIMITED, FRITH-ROAD, CROYDON, LONDON, S.E.)

According to Dr. Dujardin Beaumetz, piperazine Midy is a commendable preparation and extremely well tolerated. It certainly affords a pleasant way of exhibiting this remarkable uric acid solvent. The base has also been used in gout and as a remedy for renal colic. Piperazine Midy is a granular and effervescent powder which produces a brisk effervescence when placed in water. The measured dose of the powder contains four grains of pure piperazine. The effervescing liquid is practically tasteless. Since piperazine is deliquescent the fact that this granular powder keeps dry may be attributed to pharmaceutical skill.

(1) IODALBIN; (2) COMPRESSED TABLETS PHENOLPHTHALEÏN COMPOUND; AND (3) NUTRITIVE LIQUID PEPTONE.

(MESSRS. PARKE, DAVIS, AND CO., 111, QUEEN VICTORIA-STREET, LONDON, E.C.)

1. Iodalbin is suggested as an efficient substitute for the ordinary alkaline iodides, while it is said to avoid the gastric irritation of those salts and yet to secure their therapeutic effects. It occurs in the form of a rust coloured powder which is insoluble in water, acids, or alcohol but readily so in alkaline solutions. It passes through the stomach unaltered to be gradually absorbed in the intestine. The iodine to the extent of 21·5 per cent. is combined with a protein substance. 2. The phenolphthaleïn compound in the form of a compressed tablet contains one grain of phenolphthaleïn, $\frac{1}{20}$th grain strychnine sulphate, and $\frac{1}{60}$th grain of extract of belladonna leaves. Phenolphthaleïn is now well known as a laxative, this effect as a rule being obtained without pain. The value of the addition of

strychnine and belladonna is obvious. 3. The nutritive liquid peptone contains soluble protein prepared by means of bromelin, the hydrolytic agent of pine-apple juice. The chief advantage of peptone obtained in this way is that it is free from bitter taste. The preparation also shows diastasic power. According to our analysis the preparation contains 18·65 per cent. of solid matters, but the total nitrogen amounted to only 0·31 per cent. By adding to this preparation a few minims of beechwood creasote and of guaiacol it is made suitable for those suffering from gastric disorders, flatulence, &c., while it improves nutrition in sufferers from respiratory diseases and diminishes cough.

TURKISH CIGARETTES (SACKVILLE BRAND).

(ALEXANDER BOGUSLAVSKY, 3, SACKVILLE-STREET, PICCADILLY, LONDON, W.)

These cigarettes have been sent to us on the ground that they are made from carefully selected tobacco leaf and that accordingly they can be smoked without giving rise to irritation. The smoke from them is certainly as free from irritating effects or pungency as we imagine tobacco smoke can be, while the aroma is delicate and pleasing. Moreover, the tobacco is free from dust which we regard as an important point.

CYDER.

(WILLIAM GAYMER AND SON, ATTLEBOROUGH, NORFOLK.)

That Norfolk can produce excellent cyder is plain from a careful consideration of the qualities of the specimens sent to us by the above firm. The samples ranged according to description from "extra dry" to "sweet," intermediate samples being denominated as "old natural," "natural," "medium dry," "very dry," and so on. We give the analyses of a few selected specimens, the results serving to show the chief variations in the composition of differently designated cyders. The "old natural," for example, gave the following results: alcohol by weight, 7·93 per cent.; extractives, 5·00 per cent.; mineral matter, 0·33 per cent.; sugar, 3·22 per cent.; malic acid, 0·28 per cent.; and acetic acid, 0·34 per cent. Sparkling Pometta (resembling a hock in character but less alcoholic) gave the following results: alcohol by weight, 7·27 per cent.; extractives, 4·35 per cent.; mineral matter, 0·25 per cent.; sugar, 2·77 per cent.; malic acid, 0·23 per cent.; and acetic acid, 0·24 per cent. Oldfield perry gave the following results: alcohol by weight, 6·57 per cent.; extractives, 5·70 per cent.; mineral matter, 0·32 per cent.; sugar, 2·43 per cent.; malic acid, 0·21 per cent.; and acetic acid, 0·21 per cent. (as will be seen it contains less sugar than the previous specimens and less alcohol). In no instance did we find the volatile acid, recorded as acetic acid, to exceed 0·34 per cent., which is evidence of the sound condition of the cyders.

New Inventions.

AN EYE PROTECTOR FOR USE AFTER CATARACT EXTRACTION, WOUND OF EYEBALL, &c.

NUMEROUS eye protectors for use after cataract extraction have been suggested by Fuchs, Snellen, and others. For some years I have used a wire protector made for me by Down Bros. Lately I have adopted modified motor goggles and have found them extremely useful. They consist of a detachable calico front piece, to the ends of which a piece of broad tape or elastic is attached. Two round metal rims one and three-quarters inches in diameter and half an inch high are inserted. The sides of these are pierced by numerous holes, for ventilation. The rims are covered with tinted glass. After the cataract operation a thick oblong piece of absorbent cotton wool or Gamgee tissue is placed over each eye (3 inches by 2½ inches) and the protector is tied round the head, the rims resting on the cotton-wool pads. After from two to five days the pad is removed from the eye which has not been operated on, and in from five to eight days from the other eye. The advantages of this protector are: (1) The eye which has been operated on is completely and securely covered and it is impossible to damage the eye by a blow of any kind; (2) the cotton-wool pad can be removed much sooner from either eye as the protector excludes bright light and cold air; (3) no strapping or bandage is required; (4) it is very cool and comfortable; (5) it is quite aseptic, as the

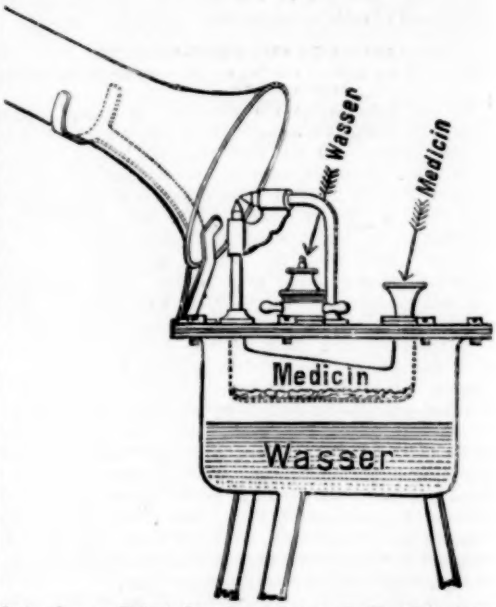
rims can easily be detached and all parts readily sterilised; (6) when the pads are removed no dark glasses are necessary as long as the patient remains indoors; and (7) it is very cheap. The protector is also very useful in the treatment of any eye diseases, operations, and accidents when the eye has to be covered or protected from bright light.

The protector has been made for me by Allen and Hanburys, Limited, of Wigmore-street, London, W.

ADOLPH BRONNER, M.D.,
Senior Surgeon to the Bradford Eye and Ear Hospital
Laryngologist to the Bradford Royal Infirmary.
Bradford.

A NEW MEDICINAL EVAPORATOR.

THE apparatus, of which a vertical section is shown in the accompanying illustration, has been devised by Dr. M. Saenger of Magdeburg for the treatment of bronchial and pulmonary diseases by the inhalation of medicated vapours. It consists principally of a circular copper boiler about three inches in diameter and two inches high, supported on three



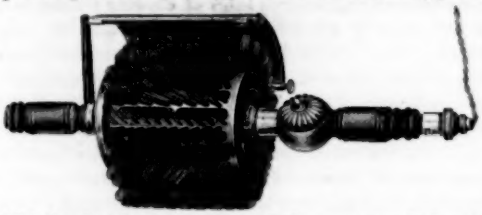
feet of a sufficient length to let a small spirit lamp stand underneath it. On the upper surface there are two inlets, one of which, indicated by an arrow and the German word "Wasser," communicates with the general cavity of the interior, while the other one, also indicated by an arrow, communicates with a separate internal chamber marked "Medicin." Each of these cavities has also an outlet in the form of a fine nozzle. These two nozzles meet at a right angle as shown, under the

wide end of a glass tube between four and five inches long (here only represented in part). To use the apparatus water is poured into the boiler at the opening marked "Wasser" from a measure holding 100 cubic centimetres, and the lamp is lighted underneath. For use in the other compartment marked "Medicin" the medicinal substance selected is introduced at the proper opening with a small spoon holding a suitable quantity. The vapour of this, heated by the steam of the boiling water, issues in a fine jet from the vertical nozzle, and the jet of steam directed across it drives clouds of strongly medicated vapour up the glass tube, mixed with hot air and steam. Dr. Saenger recommends that the inhalations should last from 10 to 15 minutes and that they should be repeated from four to six times daily. These inhalations are contra-indicated when there is a tendency to hæmoptysis. A considerable variety of substances may be inhaled in this way, including oil of turpentine, oil of eucalyptus, menthol, thymol, balsam of Peru, camphor, creasote, carbolic acid, and guaiacol. Administered in this way they have been found useful in various forms of bronchial catarrh, whether chronic, acute, or associated with pulmonary tuberculosis; also in cold in the head, sore-throat, and whooping-cough. The apparatus is portable and can be easily made ready for use at any time in a few minutes.

It may be obtained from the principal instrument makers and dealers in druggists' sundries.

THE ELECTRIC MOTOR HAIR-BRUSH.

WE are assured of the economical and mechanical advantages of this machine, which is illustrated below, but our interest in the invention lies chiefly in its sanitary aspects. In an annotation which was published in THE LANCET of March 16th, 1907, p. 753, it was remarked that while the sterilisation of combs, brushes, razors, and the hands of the operator may avail much, the rotary machine-brush scattering dust, scurf, and so forth from the dry scalp remained an unwholesome instrument. It is difficult to suggest a practical method by which this can be overcome, yet we



think the electric motor hair-brush deserves a word of praise in this connexion, inasmuch as its use is calculated to reduce the process of brushing hair by machinery to a hygienic level. To begin with, the motor is part and parcel of the brush itself, so that the current may be drawn from any point by means of a socket attachment which is identical in principle and method with the ordinary incandescent electric lamp. Thus the shafting and belting of the old method is done away with and the operator is perfectly independent of a similar operation which may be going on at the same time. All that is required are a lamp and "lead." Further, the brushing can be conducted without trouble in a separate compartment. As will be seen, however, from the illustration the brush is provided with a baffle or screen which prevents the scurf from being distributed broadcast as is the case with the ordinary brush. Moreover, the brush can readily be detached from the motor for cleaning purposes, the frame being constructed of aluminium. There are no crevices in which dirt can lodge. If the customer desires he can keep his own brush for his own exclusive use. These are sanitary advantages which must be obvious to everybody. The brush is under complete control owing to the ease with which the switch can be turned on or off by moving it with the thumb. The motor can be adapted to any circuit, and is supplied for the usual range of voltage from 100 to 250 volts and either for direct or alternating current. The cost of current for driving the brush in an ordinary shop is stated to be about 2*d*. per week for an outlay of £12. Altogether this electric rotary brush is a clever device, and one to which we may heartily accord our approval, since it gives the hair-dresser further opportunity of placing his operations on a really sanitary basis. The electric motor hair-brush is the property of the Light Electric Motor Co., Limited, of Seven Kings Electric Works, Ilford, Essex.

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.

THE annual general meeting of the London and Counties Medical Protection Society was held at 31, Craven-street, Strand, London, W.C., on April 18th, Dr. G. A. HERON being in the chair.

The annual report of the Council for 1906 formed a volume of over 100 pages and showed the large amount of work carried on by the society. Under the heading of defamation of character a number of instances were given of the way in which assistance was afforded to members of the society; one offender in regard to whom clear evidence was forthcoming was written to and he was finally made to publish in all the local newspapers a withdrawal and an apology as drafted by the society. The treatment of fractures usually affords work for medical defence societies and in the following case given in the report of the council the member interested certainly had no reason to complain of the result. This gentleman had attended a "mother's help" for fracture of both bones of the forearm. Union did not take place satisfactorily and ultimately an operation was performed, the result of which was not all that could be wished. The member complained that reports were getting about to the effect that he had set the bones badly. Accordingly the society wrote letters to the girl's mistress and to another lady accusing them of slandering the medical man. Both ladies at once put the matter in the hands of their solicitors. Ultimately one lady gave a written apology which was accepted and the mistress's explanation that her words had been quite misunderstood was also accepted. The member expressed sincere thanks for the assistance of the society in clearing up an awkward situation which threatened to have a disagreeable effect on his professional position. In another case two partners, members of the society, complained that payment of their account had been refused with threat of an action for malpraxis. The alleged malpraxis was in regard to the treatment of a fractured elbow-joint. The union of the fracture had resulted in some limitation of the movements of the arm. The patient had been sent to the London Hospital and efforts had been made to improve the movements of the arm. The father of the patient was written to and told that he perhaps did not recognise that fractures involving the elbow-joint, no matter how carefully and skilfully treated, quite commonly cause some crippling of the movements of the arm. The medical men had treated the case with skill and care and he ought not to blame them because the result was not all that could be wished for. Hope was expressed that the medical men would not be compelled to take proceedings and the complainant was told that the society would defend its members if any charge of negligence or want of skill were made against them. Shortly afterwards the partners wrote to the society saying that the complainant had paid his account and was satisfied. The usual number of cases of the following nature were satisfactorily dealt with by the society. A member complained of annoyance by letters from a patient whom he had attended for uterine troubles. She appeared to imagine that he had acted improperly and was written to and warned. She called at the society's offices and was told she had no grounds of complaint against the medical man and must not molest him in any way; she agreed to do as she was told.

Dr. HERON, in moving the adoption of the report, which was duly seconded and carried unanimously, stated that he was justified in saying that financially the society was the soundest of its kind in the country.

The meeting terminated after the transaction of the usual formal business, in the course of which the members expressed their cordial appreciation of the work done for the society by the general secretary, Dr. Hugh Woods.

THE SOCIETY OF ARTS.—Sir Edward C. Buck, late Secretary to the Government of India, Revenue and Agricultural Department, will read a paper before the Indian Section of the Society of Arts on Thursday afternoon, May 2nd, on the Applicability to India of Italian Methods of Utilising Silt. The subject has medical, as well as agricultural and geographical interests, as it is claimed that the Italian work has proved a great preventive of malaria. The chair will be taken at 4.30 o'clock.

THE LANCET.

LONDON: SATURDAY, APRIL 27, 1907.

The Workman's Share in the Promotion of Industrial Poisoning.

In all legislative reforms and in all our efforts to reduce the prevalence of preventable diseases the main obstacles which have first to be overcome are the greed of the employer and the ignorance of the workman and, unfortunately, both forces are sometimes found marshalled on the same side. Generally, however, it is the element of avarice which prevents the employer from introducing, except under legal pressure, the necessary reforms, while it is the forces of ignorance, prejudice, and suspicion which preclude the workers from reaping the full harvest of such reforms when at last they have been inscribed on the pages of the Factory Acts. An example of what must be regarded as a most culpable negligence on the part of the workman has recently been brought to light in a joint report[1] made to Mr. HERBERT GLADSTONE by Mr. H. H. S. CUNYNGHAME, Assistant Under-Secretary of State for the Home Department, and Dr. B. A. WHITELEGGE, H.M. Chief Inspector of Factories, upon a fatal case of phosphorus poisoning in a match factory at Gloucester. The fact that the soluble white or yellow phosphorus is still employed in the manufacture of lucifer matches will doubtless come somewhat as a surprise to many who have not followed events in the match industry, and it is probably a common impression that although yellow phosphorus matches are introduced into this country from abroad public opinion has prohibited their manufacture at home. Such, however, is not the case and, if we may read between the lines of the report which we are now noticing, it is more likely that the yellow phosphorus match industry will be rendered practically harmless than that the manufacture of such matches will be actually prohibited; and this notwithstanding the circumstance that in the factory at Gloucester in which the fatal case of poisoning already referred to took place both "safety" and "strike anywhere" matches are made without the use of white phosphorus.

Considerable importance has clearly been attached by the Home Office to this fatal case of phosphorus poisoning at Gloucester, but the facts elicited by the important officials who investigated it would not seem to warrant the conclusion that the factory in question was wholly, if at all, responsible for the disaster. The victim had been formerly employed for about 12 years in a match factory in Ireland and at a time when but few precautions were taken. Some two years after commencing work at Gloucester a trivial accident resulted in the fracture of the man's thigh and, as it failed to "set," amputation was resorted to. The fact of this fracture suggested to Mr. CUNYNGHAME and Dr. WHITELEGGE that it may have been induced by the peculiar brittleness of bones which is a recognised condition amongst those who have been exposed to the fumes of phosphorus for many years, and this view appears to have received support from the fact that the arrangements in the Gloucester factory were not such as to lead to the belief that the patient was really exposed to phosphorus fumes. Be this as it may, the duties assigned to the workman now in question were, having regard to the fracture and subsequent amputation of his leg, unfortunate, although the employers were probably acting under the belief that they were doing a kindly action. There were but few tasks which a cripple such as this could perform, and he was seated at the revolving table upon which the matches are lowered to receive their dip of phosphorus, his duty being to keep the table properly covered with its sticky paste of warm glue, white phosphorus, and chlorate of potash which he poured thereon by hand out of a ladle. Both the table and the pot containing the mixture were covered with a hood, through a window in which the workman watched the movements and requirements of the dipping table. This hood appeared to be working effectually and smoke generated near it was at once carried away. But, unfortunately, the crippled workman had contracted an inveterate habit of chewing tobacco, and as his infirmity precluded him from leaving his seat periodically to wash his hands it is not improbable that he conveyed phosphorus to his mouth together with the tobacco. He developed "phossy-jaw" and died. This view of the origin of the tragedy receives some support from the circumstance that at one of the dipping machines the hands of those employed were found smeared with phosphorus paste in dangerous amounts, while at both the machines in use the hands of the person removing the frames containing the dipped matches were found in practically a similar state. As will have been seen the process of dipping is not yet wholly automatic, although the firm here in question is doing its best to devise an automatic machine the introduction of which would, it is believed, cost thousands of pounds. For the most part the factory seems to be well conducted, although on one occasion the proper use of the mouth wash was neglected and on another there had been resistance to the wearing of overalls. It was not thought, however, that there was ground for prosecution, as the firm has voluntarily had a monthly dental examination of their workmen in place of the quarterly examination required by the special rules. An undertaking has now been given to introduce sundry reforms, such, for instance, as providing gloves for the workers at the dipping tables, the prohibition of tobacco chewing, and the repeated inspection of the workers' hands during work.

This incident and the report thereon raise several interesting points, such, for example, as the prohibition of the use of white phosphorus and the introduction of completely automatic machinery. The prohibition of white phosphorus would relieve the Home Office of much trouble, but, as the experts point out, such total prohibition would logically

[1] Report to the Secretary of State for the Home Department by H. H. S. Cunynghame, Esq., C.B., Assistant Under-Secretary of State, and B. A. Whitelegge, Esq., C.B., M.D., H.M. Chief Inspector of Factories, on the Match Factory of Messrs. Moreland and Sons, Gloucester, with special reference to a recent fatal case of phosphorus necrosis. Wyman and Sons, Limited, Fetter-lane, E.C. 1907. Price 1d.

seem to involve the prohibition of the use of many other substances which are largely used in industry and which have caused a much larger number of industrial accidents. Moreover, one effect of such prohibition would be to throw out of employment a large number of workers. It seems to us that in this case the policy of the Home Office of gradual regulation and control rather than sudden and actual prohibition is a wise one from an administrative standpoint, and it may be that the remarkable progress in factory legislation and administration which has marked Dr. WHITELEGGE'S term of office in the Factory Department is due largely to this spirit of compromise, a spirit which has been always associated with steady advance. But whatever may be the outcome of further investigations which are being made relative to the match industry, it is obvious that the workmen themselves cannot be regarded as by any means free from blame. The dangers which they incur must be obvious to them, as also must the facilities which are afforded for obviating such dangers, and to absolve the workman from all responsibility is surely a policy fraught with disastrous consequences to his moral fibre.

The Turkish Lazarets.

WE begin in another column a series of articles upon the Turkish lazarets which we hope will be found interesting to our readers. We are certain that they give information which has never been before available upon the important work for the preservation of the health of Europe undertaken by the Constantinople Board of Health, by the British delegate of which board they are written. The word "lazaret," as applied to some of the institutions dealt with in the articles, is in many ways an unfortunate one. To most uninstructed minds it conjures up visions of the poorest of poor-houses, sheltering ragged beggars with loathsome sores, like those of the Lazarus of the parable, or even lepers in all degrees of deformity. To such it comes as a surprise to learn that a modern "lazaret" is nothing of the kind, but in many instances a vast and costly establishment where healthy people are kept under observation for a short period, in order that any case of cholera or plague developing among them may be at once isolated and dealt with. In 99 instances out of 100 no such disease develops and the pilgrims (for whom most, but not all, of the lazarets are provided) leave the institutions with little more to complain of than the delay. In the meantime they have had the advantage of a rest, of undergoing at least one good douche-bath, and of having their clothes and effects thoroughly disinfected in a modern steam stove.

For many lazarets positions of great natural beauty or attractiveness have been chosen. Those of Camaran and Abu-Saad, for instance, occupy coral islands in the Red Sea—sites which, though they can scarcely lay claim to any beauty, have a very marked and interesting character of their own. The lazaret of Tor is built in an oasis on the strip of desert at the foot of the Sinaïtic range—a spot of unsurpassed attractiveness. That of Beirût occupies a promontory jutting out into the Mediterranean, near the foot of the Lebanon, and the views all round are truly splendid. Were all the other qualities of these establishments on the same high level of perfection as the natural sites they occupy all the world would wish to live in lazarets. Unfortunately, however, most of them are very far from perfect. Some sink to very low depths of imperfection and are the subject of constant complaint from those who have to undergo quarantine in them. Others require much to be done to them before they can be said to come up to any ideal standard of perfection. To this last category belong most of the lazarets described in the articles. During the winter 1905-06 the Constantinople Board of Health despatched a commission, consisting of three of its members, to inspect some of the principal lazarets under the board's management. The commission was composed of the British and Greek delegates and one of the Turkish members of the board. While the primary object of the commission's work was to inspect the large lazaret of Camaran, near the southern end of the Red Sea, advantage was also taken of the opportunity to visit and report upon several other of the board's sanitary institutions—notably the lazarets of Abu-Saad, near to Jeddah, and of Beirût, and the new disinfecting stations of Jaffa and Rhodes. The British delegate being a member of the commission, had thus the occasion to examine thoroughly several institutions for the prevention of the spread of epidemic diseases, some of which are of international importance, not only on account of the part they play in protecting Europe from those diseases, but also from the prominence assigned to them in the proceedings of successive international sanitary conferences.

The only information hitherto available in regard to these institutions has been contained in reports to the Constantinople Board of Health from the officials in charge of them. Such reports are but too often of a fragmentary character, and, indeed, a comprehensive and detailed account of the actual state of any of these lazarets or sanitary stations did not, until the return of the inspection commission, exist. Further, of most of them there were either no detailed plans or plans of a very elementary (and, it must be added of some, inexact) character, while in the case of none of them had photography been systematically employed to bring home to those responsible for their management the nature and actual condition of the institutions they had to deal with. The difficulty experienced in the management and upkeep of these large and distant establishments can in the circumstances be easily imagined; and it is undeniable both that errors have been committed in the past from the lack of such information and that the institutions themselves have suffered to some extent in consequence. The reports, now printed, of the inspection commission should go far to fill up these regrettable gaps in the knowledge of those concerned. These reports (in French) have been presented to the board and to the governments interested, and it may be hoped that the detailed recommendations they contain for the thorough repair and completion of the institutions in question will ere long be put into practice. The reports are profusely illustrated with charts, plans, and diagrams, and with a series of photographs taken by the British delegate, many of which will be reproduced in his articles in our pages.

School Hygiene.

THE Second International Congress on School Hygiene which is to be held in London, under the presidency of Sir LAUDER BRUNTON, during August Bank Holiday week will certainly be attended by a profoundly interested public. And of these we hope that many will recognise that the time has come for us to include in our national scheme of primary education due attention to the mental and physical condition of the children. It is almost inevitable that a great reform like the Education Act of 1870 should bring trouble in its train, for it may be taken as an axiom that the law of progress is a law of sacrifice; but our children, in whom our hopes for the race are vested, should not be the victims. Hitherto the nation has not fully reaped the results expected when we first aided education financially and subsequently made it compulsory. It is true that the general intellectual standard has been raised, and it is probable that many of the statements to the effect that the elevation has been at the expense of physical fitness have been made on insufficient grounds, but no one disputes that school hygiene has still to be developed as a national movement. With the increased knowledge of 35 years the time has, we hope, arrived when our primary education will be carried out under conditions which will result in a larger measure of utility to the nation, and the injustice which pure ignorance has caused some of our children to suffer will be removed. The forthcoming Congress, composed, as it promises to be, of men and women of experience in educational questions in every civilised country in the world, should be the starting point for a new order of things. Quite apart from sentiment, quite apart from the interests of the children, the mental, moral, and physical education of those who will be the fathers and mothers of future generations is of the most vital importance to the existence of a nation. A race, to maintain its position among the peoples of the world, must of necessity be composed of healthy men and women; their physique will assist their mental capacity, but both must be good to be able to cope with the advance of knowledge which has characterised the past century, and which promises to be still more rapid in the years immediately before us.

That we have been slowly awakening to a sense of our responsibilities in the matter of education and its bearings on national physique is shown by reference to recent Royal Commissions, Parliamentary inquiries, and Departmental Committees which have dealt with questions of physical degeneration. Numerous societies have also begun to discuss the hygiene of childhood and allied subjects, a section of educational science has been started at the meetings of the British Association, and the furtherance of the teaching of hygiene and temperance in elementary schools has been officially approved of by the British Medical Association. A conference on "The Teaching of Hygiene and Temperance in the Universities and Schools of the British Empire" was held on Tuesday afternoon last at the examination hall of the Conjoint Board of the Royal College of Physicians of London and the Royal College of Surgeons of England. This conference was convened by a composite committee of the hygiene and temperance committee of the medical profession and of the health committee of the British Medical Association, and the attendance was strengthened by the inclusion among the speakers of prominent colonial citizens present in this country in connexion with the Imperial Conference. The sessions were presided over by Lord STRATHCONA, the veteran High Commissioner for Canada, and Sir JOHN GORST, recently Minister of Education, whose attention to the conditions by which the health and vigour of the children of the nation can be promoted by the State have recently been incorporated in a popular volume. Interesting papers were read by Mr. J. L. HUGHES, chief inspector of schools in Toronto, and Sir VICTOR HORSLEY, while practical addresses were delivered by the Hon. ALFRED DEAKIN, the Prime Minister of the Commonwealth of Australia, Mr. PEARCE GOULD, Sir J. A. COCKBURN, M.D., a late Minister of Education in Australia, Sir PHILIP SYDNEY JONES, M.D., the well-known Australian physician, Mr. ALFRED MOSLEY, and others whose personal interest in all questions of education, hygiene, and temperance are well known to our readers. This Conference, held at the time when these very subjects are engaging the attention of Parliament and the public, ought to have an important bearing upon national thought, and will help to insure that the International Congress on School Hygiene will commence its labours in the autumn of this year in possession of a varied audience and with wide sympathies in its work already aroused.

To return to this Congress, its programme, showing the many distinguished authorities who will take part in its discussions, justifies the hope that the hygiene of education will be dealt with thoroughly in all its bearings. There is one matter which has not hitherto received the practical attention from medical men which it rightly demands—namely, the construction of school buildings in the light of the requirements demanded by modern scientific knowledge. In suburban areas, where houses are springing up rapidly and where the population soon outgrows the educational accommodation, the necessary overcrowding of the children in the school may form an evil of the greatest consequence to the population from the health point of view. The influence of the school on the spread of infectious diseases is well known, and, as Sir LAUDER BRUNTON has pointed out, in pleading for the pressing need for medical inspection, that the infection of one child may result in an epidemic of scarlet fever or diphtheria which may spread over a district. This obvious fact must appeal to all as a reason for considering very carefully the sanitary construction of school buildings. Again, it is manifestly difficult to teach children lessons of hygiene which they will respect, while the building where they spend a great part of their time affords an object lesson in opposition to the subject taught. Everyone knows that an object itself creates a lasting impression on the mind of children, while a verbal description may leave them comparatively unmoved, and it is useless to attempt to impress upon a child the importance of fresh air or the beneficial effect of sunlight while the construction of the school may be such as to make both a positive hindrance to teaching. While one child is suggesting that he cannot see the blackboard because the sun is shining directly in his eyes another may be complaining of earache

consequent upon an open window or door. If the teacher draws down the blind or closes the offending ingress for air the practical application of the hygienic teaching is lost, because the school building is not adapted to the purpose it is supposed to fulfil, or because the class is too large by reason of the school being overcrowded.

Hospitals were never intended, we presume, to be used as educational establishments so far as the patient is concerned, but there is evidence to show that these institutions play no unimportant part in engendering in the suffering poor who are treated in them hygienic habits which are afterwards reflected in the home life. This useful result is due in a great measure to the fact that our hospitals, owing to a lavish out-pouring of charitable funds, are becoming day by day more structurally suited to their purposes. In like manner the school ought to have a powerful effect on the home life of the child, but we fear that this is not so in many cases. Architects have had this subject unde their attention for years, and it is not a reproach upon the experts that the school buildings are so often faulty. But it is a reproach upon the nation and one that we trust will gradually be removed. The general provision of elementary schools according to modern scientific requirements would mean the expenditure of a larger sum of money than the nation would be prepared to pay, but the necessity for national education having been admitted it must now be recognised as false economy to attempt to educate the child on a system which does not lead to the best results.

The Prevention of Tuberculosis.

PROPOSALS for the introduction of legislative measures to assist in the prevention of tuberculosis are being constantly brought to the notice of the public sanitary authorities. The most prominent of these are concerned with the question of food-supply and the introduction of compulsory or voluntary notification. We have recently received two communications on the subject which are of considerable interest and importance. One is a report from Dr. WILLIAM COLLINGRIDGE, the medical officer of health of the City of London, relative to the second interim report of the Royal Commission appointed to inquire into the relations of human and animal tuberculosis. The second communication is from the secretary of the Edinburgh Local Government Board and is entitled "Administrative Control of Pulmonary Phthisis." Here we may once more express our regret that the term "pulmonary phthisis" has been employed. The expression "pulmonary tuberculosis" is from a pathological point of view more correct and convenient and we trust the word "phthisis" will be allowed to become obsolete, since it is both wrong and unscientific. Dr. COLLINGRIDGE gives a good summary of the second interim report of the Royal Commission on Tuberculosis and points out that the conclusions arrived at are of vital importance as affecting the food-supply of the country and the line of action which should be adopted by sanitary authorities in dealing therewith. The recommendations emanating from the first Royal Commission in 1896 were somewhat discountenanced by the announcement made by Professor R. KOCH at the meeting of the British Congress on Tuberculosis held in London in 1901, that while bovine tuberculosis was easily communicable from animal to animal human tuberculosis was not capable of being so conveyed, and that he was unable to accept the possibility of infection of man from animals. Naturally enough, as Dr. COLLINGRIDGE points out, this pronouncement was largely accepted by the trade and from that date it practically became an article of faith with those dealing in cattle that tuberculosis could not be conveyed to man from animals. The two interim reports of the second Royal Commission, dated respectively 1904 and 1907, go far to prove that the effects of the bacillus of bovine and human tuberculosis are one and the same. This contention is supported by the evidence accumulating from all parts of the world as to the identity of human and bovine tuberculosis.

The Commissioners were able to give a positive answer to the question as to whether the human body could be infected by bovine tuberculosis. They were further of opinion that a very considerable amount of disease and loss of life, especially among the young, must be attributed to the consumption of cow's milk containing tubercle bacilli. Dr. COLLINGRIDGE is of opinion, and we are in agreement with him, that the second interim report, to which we have referred, calls for no change in the present position of meat inspection, since the degree of danger incurred by the consumption of the flesh of tuberculous animals is probably not great. The recommendations of the first Royal Commission remain as the standard by which meat in this country is to be judged. The standard may, or may not, be altered in the future but in the meantime the correct course is to accept it absolutely, and the various sanitary authorities should take precautions to ensure that the circulars of the Local Government Board are strictly complied with. With regard to milk-supply, the danger to health and life has been proved to be a real and ever-present one and more stringent measures are necessary to prevent the use of tuberculous milk. The question naturally arises as to the nature of these measures. Dr. COLLINGRIDGE urges in the first place that the making of regulations under the Dairies, Cowsheds, and Milkshops Order should be compulsory throughout the country, and some modifications bringing them up to date should be made, and we maintain that speedy and stringent legislation in this direction is called for. Careful supervision of farms, cattle, and milk utensils would be necessary but until orders in Council are made mandatory but little good can result from such precautions. The Contagious Diseases Act, 1878, gave power to the Privy Council (now transferred to the Local Government Board) to make an order under which local authorities were empowered (*inter alia*) to make regulations for the inspection of cattle in dairies, for securing the cleanliness of milk stores and of milk utensils, and also for regulating the lighting, ventilation, cleansing, drainage, and water-supply of dairies and cowsheds. If these regulations were made compulsory on every sanitary authority much would be done to lessen the danger that arises from tuberculous cows.

The document emanating from the secretary of the Edinburgh Local Government Board is also an interesting one. The term, "pulmonary phthisis," is also adopted here, although the synonym, "tuberculosis of the lungs,"

is placed within brackets. Some useful remarks are made on disinfection of rooms which have been occupied by tuberculous patients, and on the isolation and treatment of those suffering from the disease. It is urged that local authorities, instead of attempting by themselves to provide the trained medical skill and scientific laboratories necessary for effective management, should either utilise existing sanatoriums or combine with other authorities for a properly equipped sanatorium. With this suggestion we are entirely in accord, for as we remarked in a leading article in THE LANCET of April 6th of this year, we have already suffered great disappointment from idle prophecies and ill-considered theories. We would further remind our readers that the ultimate results of open-air treatment have yet to be manifested. Especially in regard to the benefits to be derived by the working classes from "sanatorium treatment" sufficient time has not yet elapsed to enable a definite pronouncement to be made as to the percentage of cases in which absolutely permanent arrest ensues. We are afraid that the hopes freely expressed by the advocates of sanatoriums for the working classes may not be fully justified, and local authorities may well hesitate before expending public funds upon the erection of new buildings. In this report some interesting remarks will be found on "Dispensaries for Pulmonary Phthisis," and we cordially endorse the suggestions that are made. The work of such a dispensary should include (*a*) the medical examination of patients, either at the dispensary or in their own homes; (*b*) inquiry by a medical man or a competent nurse into the history of the illness, the home conditions, the economic condition of the family, the occupation, and so on; (*c*) arrangements for providing medical treatment and nursing of patients who can be treated at home without risk of infection; and (*d*) dispensing of medicines and disinfectants. These and many other provisions, especially personal and printed instructions to the patients and their friends as to the modes of preventing the spread of the disease, would do more, we believe, to lessen the incidence of the disease than any other measures. The mortality from pulmonary tuberculosis has fortunately greatly decreased of recent years, and we strongly deprecate undue haste in the adoption of stringent regulations which are of doubtful utility and may endanger the social life of the community.

Annotations.

"Ne quid nimis."

THE MEDICAL PROFESSION AND THE RECENT BUDGET.

No alteration under the recent Budget is to be made in indirect taxation, and direct taxation is responsible for the only two changes which are to be made—viz., a reduction of 3*d*. in the pound in income-tax on the "earned" portion of incomes which do not exceed £2000 from all sources (the "unearned" portion and incomes which exceed £2000 still paying 1*s*. in the pound), and the raising of the death duties on estates of over £150,000. The differential treatment accorded to the "earned" portion of incomes which do not exceed £2000 from all sources will appeal particularly to members of the medical profession, for the number of medical men dependent for their income upon their professional work, and not receiving £2000 per annum in return for the work is proportionately large. The relief afforded to them by the reduction of 3*d*. in the pound will be very welcome, but we advise them strongly to see that their accounts are kept in such a way as to show the extent to which they can benefit. Certain alterations are to be made in the matter of the return of incomes. Everyone will be required to make a declaration and to return the amount of his income, even though it is all taxed at the source, and those claiming at the lower rate of 9*d*. will be required to make their claim before the end of September in each year. Penalties will also be increased and the period of recovery will be extended in cases of evasion. Returns will also be demanded from all employers, requiring them to give not only the names as at present but also the salaries of all their employees. This latter requirement will not particularly affect the practitioner, nor will the increase in the death duties cause the majority of our profession much anxiety. It seems to be taken for granted that a tax of 1*s*. in the £ is to be the normal tax for the future upon all unearned incomes, even in times of peace. We see that there can be no material reduction of the tax whilst the present Government is in power, pledged as it is to many schemes of reform; but we make this comment in no political spirit, for it is doubtful if any sound Government could introduce a more economical scale of national living in view of the changed conditions of modern life. Whatever party or group of parties comes to power the evolution of our civilisation will be along lines leading to increased expense; and so long as the developments work for the better health and the happier life of the community, so long will the medical profession second the efforts of our legislators.

THE ACTIONS OF FORMIC ACID AND THE FORMATES.

IN view of the attention which has been drawn recently to the therapeutic uses of formic acid and the formates it is of interest to refer to a somewhat remarkable book[1] which we have received from Dr. Clement of Lyon dealing with the history of the use of these substances and describing their actions. He claims that these compounds have a musculotonic action, increasing the force of contraction and the resistance to fatigue to such an extent that, as determined by Mosso's ergograph, the work done under their action may be five times that under normal conditions. The action is, moreover, not confined to striated muscle, but is equally remarkable upon the non-striated muscular fibres. Dr. Clement claims that after the administration of formates the subjective sensations experienced, usually within 24 hours, are those of a sense of firmness of the muscles and capacity for effort, with an absence of sensation of fatigue and weariness even after prolonged exertion or hard work. He further maintains that the circulation is improved, the respiration is deeper and slower, while the dyspnœa after exertion is markedly lessened. As an instance of its tonic action upon non-striated muscle the effect of formic acid upon the contraction of the bladder of old people is described, since in them it augments the power of the vesical wall and facilitates the act of micturition. It is also said to possess a diuretic action, especially in the form of potassium formate. Analysis of the urine showed that 62 per cent. of the dose given is excreted by the kidney. M. Huchard, who has tested the drug at Dr. Clement's

[1] L'Acide Formique et la Force Musculaire (Formic Acid and Muscular Power). Par le Docteur Clement de Lyon. Paris: Vigot Frères. 1905.

recommendation, confirms its musculo-tonic and diuretic activities and has observed a marked increase in the amount of urine passed by a patient with mitral disease after its administration. Dr. Clement has also obtained good results in certain cases of muscular tremor, notably those associated with enfeeblement of the muscles or hypotonus. A noteworthy advantage of the formates is their lack of toxicity; experiments prove them to be no more poisonous than common salt. Moreover, Dr. Clement has taken formic acid himself daily for two years with nothing but benefit. The substance may be given in the form of the acid itself or in combination as a formate. The manner of using the acid is to administer from four to six grammes of a 50 per cent. solution diluted with water to a third of a litre or a litre, according to taste, the fluid being sweetened or flavoured if necessary. This is divided into two parts and half is taken before breakfast, the other half before the mid-day meal. In case this quantity of acid is disagreeable, it is easy to neutralise it by bicarbonate of soda, the fluid being taken as soon as effervescence is completed. Or the prepared salt sodium formate may be given in daily doses of from three to four grammes. The idea of utilising formic acid was suggested to Dr. Clement by the extraordinary activity of the common ant. He finds that formic acid was a constituent of some of the complex medicaments of former days, notably in Hoffmann's "Elixir of Magnanimity," but it seems probable that formic acid derived from the bodies of ants was used some time before the beginning of the seventeenth century. Dr. Clement is very enthusiastic about the value of formic acid and its compounds and suggests that it will be found to have a social value as well as a medicinal in increasing the working capacity of mankind and in replacing alcohol in conditions of exhaustion and fatigue. His book is an interesting, if sanguine, presentation of his views, and since some of his contentions have been confirmed by other observers it would seem that these substances are worth a more extended trial than they have yet received.

THE OUTLOOK IN MEDICINE.

THE address delivered by Dr. James Grey Glover before the North London Medical and Chirurgical Society on April 11th, which we print on another page under the title "The Outlook of the Medical Profession: Scientific, Social, Financial," cannot fail to awaken the interest of our readers, for all of us have at heart the well-being of our profession, though we may differ at times as to the steps which should be taken to secure it. It is a matter of satisfaction that Dr. Glover, who has devoted so many years of service to the general practice of medicine, and who has held office in the General Medical Council in circumstances which must have given him an extensive knowledge of its many aspects, is able to conclude a comprehensive survey of the professional outlook with these cheering words: "Had I my life to begin again I should study medicine for the intense interest of it, for the companionship of it, and even for the security of a modest income which every earnest and enthusiastic and fairly intelligent man may expect." In spite of the recognition of the disabilities and hindrances which beset the path of the practitioner of medicine, a like cheerful note runs through the whole address, which has been prompted in spirit by the recent action of a French plébiscite of 15,000,000 voters who acclaimed as the greatest Frenchman of the last century Louis Pasteur, the supremacy of his position above that of Napoleon I. being clinched by the verdict of an enormous majority. This great popular voice might well hearten a reviewer of the prospects of medicine as a profession, for if the children of a land where the idea of "*la gloire*" has hitherto been inseparable from that of "*l'armée*" will thus acclaim the healer above the soldier it may well seem that the civilisations of the future will exalt the healing art into the front rank of honour. We in this country have not yet arrived at the point of sympathy towards scientific achievement which has been reached by at least two other European nations, but the general tributes lately paid to Lord Lister, whose original and patient genius led him to apply to practical surgery the discoveries of Pasteur, show that the public mind in our matter-of-fact country has really been stirred by the story of the development and achievements of antiseptic surgery. The achievements of Pasteur and Lister are the source of Dr. Glover's optimism and those of us who have lived whilst these men were working have undoubtedly witnessed a new birth of medicine. Let us add the name of Virchow with his illuminating conception of a rational pathology and the three—Pasteur, Lister, and Virchow—will stand as witnesses that in the nineteenth century the claims of our profession to the possession of a science no less than an art were set upon permanent foundations. So far, then, we are in accord with Dr. Glover; he has right reason for rejoicing in the scientific advance of his profession. Can we look with equal satisfaction on the social or ethical aspects to which he next draws attention? Into these sides of the professional life many reforms have come, but also there have crept many defects which combine to weigh heavily on the general practitioner and which in some instances have sufficed to handicap him as heavily on the social and financial sides as the medical renaissance we have alluded to above has helped him in his scientific knowledge and treatment of disease. The matters at fault are fairly and clearly indicated by Dr. Glover under their familiar heads and we need not here recapitulate them; we have on previous occasions dealt individually with them and many attempts have been made to remedy them. Dr. Glover's suggested remedy for them all is simple enough and very wholesome—namely, self-help, but self-help is not enough. It is an individual virtue and the medical profession requires, if social development is to keep step with scientific, corporate action upon agreed lines. By all means let the practitioner pay detailed attention to little maladies as well as great; certainly, this will minimise the chances that his patients will drift off into the hands of unqualified persons. It is, moreover, his plain duty, for the little maladies taken early and treated less for what they are than for what they may signify are the finger-posts upon the track of preventive medicine. But the profession as far as the other grievances detailed by Dr. Glover are concerned must face with a united front the abuse of medical charities, the competition of half-qualified persons, and the tyranny of such medical aid societies as are not as reasonable in their actions as their delegates may be when sitting in council. A majority among the medical profession who will face these problems with the cheerful common-sense shown by Dr. Glover is not sufficient for our growing social needs. There are many medical men now ready to act together instead of complaining singly, but the much-needed reforms will not follow until the public interest in the well-being of the medical profession is thoroughly aroused.

MR. G. B. MORGAN AND THE SUNDERLAND INFIRMARY.

ON April 16th an interesting ceremony took place in the Sunderland Infirmary, the occasion being the presentation by the committee of that institution of an illuminated address to Mr. George B. Morgan, who is the senior surgeon, who has been connected with the institution for 50 years, and who for 37 years has held the post of chairman of the medical board. This is a record of which any man

might well be proud and we join with the committee in congratulating Mr. Morgan and the infirmary upon such an extended term of service. The chairman was Mr. Alderman S. Richardson, who in making the presentation referred to the various improvements which Mr. Morgan's enthusiasm had led to. Through him, for instance, Mr. J. S. G. Pemberton had been led to see the need for a children's hospital and also to give the land for such a building. The introduction of Hospital Sunday and of workmen's subscriptions were also due almost entirely to Mr. Morgan. Many others spoke, amongst them Mr. T. F. Hopgood, a member of the medical staff, who pointed out that to Mr. Morgan was mainly due the abolition of the ticket system, while another point was the improving of the nursing. In reply, Mr. Morgan, after first thanking his friends for their kindness, gave some interesting reminiscences of Sunderland and the infirmary when he first knew it as house surgeon in 1857. Altogether the occasion was a memorable one, both to Sunderland and to the medical profession in general.

A CASE OF LOCAL ANTHRAX COMPLICATED BY PNEUMONIA.

THE circumstances relating to the death of a warehouseman in the employ of a firm of mohair spinners at Bradford were recently investigated by the Bradford city coroner and after some discussion the jury eventually found that death occurred from pneumonia, probably accelerated by anthrax. The history of the case is briefly as follows. A warehouseman, aged 55 years, employed in rooms used for the storage of tops, noils, and waste, complained on March 23rd of feeling unwell and of some slight swelling about his left eye. He was seen by Dr. F. W. Eurich, bacteriologist to the Bradford Investigation Board, which was recently founded to inquire into the increasing frequency in the neighbourhood of cases of anthrax. On March 29th Dr. Eurich found a typical malignant pustule over the left eye involving both eyelids. There was considerable elevation of temperature and signs of disease were observed at the base of the right lung. He subsequently saw the man in consultation with his own medical attendant. The patient was given antitoxic serum to the total amount of 40 cubic centimetres and appeared to hold his own until the evening of April 1st when jaundice supervened and he sank rapidly, dying in delirium on the following day. Dr. Eurich, with the assistance of Dr. Mitchell, made a post-mortem examination and found after bacteriological and microscopical investigation that the pustule was due to local anthrax, but the lung condition was pneumonic, no anthrax bacilli being found in it or in any other of the internal organs. He gave as his opinion that the cause of death was pneumonia, the local anthrax having probably lowered the patient's resisting power. The case is an exceptional one, in the accidental complication of local anthrax by pneumonia, producing grave symptoms and signs very similar to those of the pulmonary form of anthrax and leading to a fatal issue, and also in the association of jaundice, which is recognised as a rare complication of lobar pneumonia, especially when the right lower lobe is involved. The case further illustrates the risks encountered by those engaged in dealing with imported hides, skins, wools, and hairs, even when extreme care is exercised, and enforces the necessity of rigidly carrying out every possible precaution. It came out in evidence that during the last week of his employment the deceased had been engaged in manipulating Turkey and Cape mohair. This mohair had been opened over an efficient sorting board as prescribed by the regulations, and before it reached him had been sorted, washed, and combed, so that it was presumably clean and free from dust. The coroner stated that he was informed by the Inspector of Factories that the firm who had employed the deceased were second to none in their strict adherence to the regulations, and that they were always willing and anxious to comply with any suggestion made to them. Although in this case death was not directly due to anthrax there is a reasonable probability that the pustule would exert an unfavourable effect upon the course of a disease so serious in itself as pneumonia. The Government regulations require that the sorting of wools shall be carried out over perforated tables with a downward exhaust ventilation, that the dust shall be burnt, and other precautions carried out, but the present case shows that even these are insufficient where dangerous infected wools are concerned. At present the importation of infected material cannot be prevented, while bales of wool are received from certain districts containing inferior and infected fleeces concealed within the bundles, and until some means of overcoming this fraud is forthcoming cases of industrial anthrax are liable to occur in spite of every care and precaution.

UNIFICATION OF THE PHARMACOPŒIAL FORMULAS FOR POTENT DRUGS.

IN THE LANCET of Feb. 23rd, p. 527, reference was made to an international agreement respecting the unification of the pharmacopœial formulas for potent drugs, signed at Brussels on Nov. 29th, 1906. A report has been submitted to the Pharmacopœia Committee of the General Medical Council by the committee of reference in pharmacy, showing what changes in the next issue of the British Pharmacopœia will be necessary to give effect to the international agreement. These changes chiefly affect the strength of preparations of potent drugs and aim at producing uniformity of strength in all countries whose Governments have signed the agreement. Tincture of aconite, which is to be made from roots that have been kept not longer than one year, will be standardised to contain 0·05 per cent. of total alkaloid. In the case of belladonna leaves the drug is to be restricted to the dried leaves, not including, as at present, the flowering tops. The tincture of belladonna is to be prepared from the leaves instead of the root, but the strength would be about the same as now—viz., 0·05 per cent. of total alkaloid. At present there are two official extracts of belladonna, but it is proposed to retain only the leaf extract and to standardise it to contain 1 per cent. of alkaloid. With regard to the other preparations of belladonna, it is proposed that the present standardised liquid extract of the root should be retained and that the liniment, ointment, plaster, and suppository of belladonna should be made from it as at present. It would be necessary to prepare the liniment from belladonna root owing to the high colour of preparations of the leaf, which would render the liniment unpleasant to use. In the case of hyoscyamus the leaf only is to be used for making galenical preparations. It is imperative that the extract of hyoscyamus should be standardised, as all green extracts are liable to vary considerably, and sometimes to a dangerous extent, in alkaloidal content. In the case of nux vomica the retrograde step has been taken of standardising the seed to contain 2·5 per cent. of total alkaloid. Standardisation to total alkaloid does not insure the presence of any strychnine whatever. The proportion of strychnine to brucine in the total alkaloid has been shown to vary from 1:1 to 1:1·8, from which it follows that the genuine seed, passing the test laid down in the agreement, may vary as much as from 1·0 to 1·4 per cent. in their toxicity. At present the British Pharmacopœia requires preparations of nux vomica to be standardised on the basis of the strychnine present and in this instance it is very probable that the British Government will be advised to assert its right by Reservation IV. of the agreement to make such modifications in detail as the progress of

science may from time to time render necessary. The time-honoured official name of Dover's powder, pulvis ipecacuanhæ compositus, will in future be replaced by the more descriptive name, pulvis opii et ipecacuanhæ compositus. In many cases the adoption of the standards agreed upon will considerably increase the strength of official preparations of potent drugs. It is agreed that tinctures of potent drugs shall be prepared of the strength of 10 per cent. and fluid extracts of the strength of 100 per cent. As a result tincture of strophanthus will be made four times as strong as the present tincture, the strength of tincture of cantharides will be increased rather more than six and a half times, that of ethereal tincture of lobelia twice, and that of tincture of iodine three and one-third times, while tincture of opium would be made one-sixth stronger than at present. In the case of tincture of iodine much trouble may result from the large increase in strength of a preparation so widely used for external application. The strengths of the following preparations will be reduced: tincture of colchicum seeds by one-half, tincture of digitalis by one-fourth, tincture of nux vomica by one-half, and syrup of ferrous iodide, the strength of which will be considerably diminished. The strength of mercurial ointment will have to be reduced by rather more than one-third, an alteration which will correspondingly affect the various preparations into which the ointment enters. These alterations in the strength of official preparations will involve corresponding alterations in the doses, and in some cases great care will have to be taken to avoid serious mistakes through the administration of excessive doses. This is particularly the case with tincture of strophanthus, which when increased in strength will have a dose of from one to five minims. As indicated in the annotation referred to above the various changes proposed will not come into effect until the publication of a new British Pharmacopœia.

THE SOILING OF THE OMNIBUS FLAG.

Two years ago when discussing the hygiene of the London streets in relation to the increasing motor traffic we remarked, with an obviousness that is more apparent now than it was then, that whereas the chief source of the pollution of the streets was the excreta and emanations of horses it would be in the near future the products of perfect and imperfect combustion of petrol. This prediction was soon realised and we have now to face the new pollution and to consider whether it is worse than the old. Previously the pollution was chiefly biological, now it is chemical, or, to be accurate, it is both, with a rising tendency in the latter direction. Pathogenic organisms may therefore give way to poisonous gases, but hygiene condemns the existence or encouragement of either. On the whole we think that, owing probably to the increased vigilance of the police authorities over the motor traffic, the nuisance arising from fumes and smell of imperfectly ignited petrol or of over-heated lubricating oil has been reduced for the moment to some extent. There is a daily test being carried on (no doubt unwittingly) by at least one of the motor omnibus companies which seems to us to be faithfully recording the fact that the air of the London streets is not so clean as it used to be. We refer to the flag carried as a distinguishing mark by certain motor omnibuses. There is not the least doubt that the colours of this flag are besmirched much more quickly than in the days of universal horse-drawn traffic. In many cases the flag is practically black and the pattern can barely be recognised. This result is hardly surprising when we consider the miles and miles of street air into which motor gases and smoke are being discharged and through which the tell-tale flag is daily trailed. We should not be surprised to find that in treating this smoke-begrimed flag with a suitable solvent a greasy extract would be obtained having a smell which might fairly be traced to petrol. In connexion with this point we may refer also to some complaints which we have heard from householders and house decorators that since the great increase in motor traffic the external paint of many houses has shown more rapid signs of deterioration than was ever experienced before. It is easily conceivable that an atmosphere containing oily fumes would attack the oil of the paint and thus expose the lead compound to the blackening action of the sulphur present in the smoke discharged from the chimneys.

STATISTICAL INVESTIGATIONS OF PULMONARY TUBERCULOSIS.

UNDER the title of "A First Study of the Statistics of Pulmonary Tuberculosis," Professor Karl Pearson of the Biometric Laboratory, University College, London, has contributed an interesting paper to the Drapers' Company Research Memoirs (Studies in National Deterioration).[1] The investigation in question is based upon a series of family histories placed at Professor Pearson's disposal by Mr. W. C. Rivers of the Crossley Sanatorium, Frodsham, Cheshire. The records were made by the medical men of that institution and applied in both subject and family history to cases of pulmonary tuberculosis only. The patients were almost wholly of the lower middle and working classes and came principally from Manchester. Questions relating to various aspects of heredity are the leading subjects of the present paper and may be conveniently summarised under the headings of (1) the inheritance factor in pulmonary tuberculosis; (2) fraternal heredity; (3) the fertility of tuberculous stocks; and (4) the distribution of pulmonary tuberculosis in tuberculous families. It will here be sufficient to give a brief abstract of what is said on the subject of the parental transmission of the tuberculous diathesis. In using the data obtained from Crossley Sanatorium as a basis of computation it is at the outset remarked that pulmonary tuberculosis is a disease the frequency of which culminates between the ages of 20 and 30 years. Hence many patients, if members of large families, have brothers and sisters who have not yet passed or have perhaps even not yet reached the danger zone. The number of brothers and sisters of a patient who are also tabulated as suffering from the disease is therefore a minimum limit and not a real measure of the extent of the disease in a family. For this reason, although the actual Crossley records only show about 32 per cent. of the offspring of tuberculous parents to be themselves tuberculous, 50 per cent. is the proportion adopted in the computations, and the further assumption is made that the proportion of tuberculous persons in the community at large is from 10 to 13 per cent. From all these figures several values of the correlation coefficient (r) are obtained by six biquadratic equations of the form

$$A = r + Br^3 + Cr^3 + Dr^4,$$

the constants which we have called A, B, C, D, being represented by various positive and negative numbers lying between 1·155432 and 0·017452. From the values of r so obtained Professor Pearson concludes that the intensity of the inheritance factor in pulmonary tuberculosis is greater than 0·4 and less than 0·6—an inheritance factor closely approaching that of certain physical characters in man. He is convinced that the perpetuation of the disease in families cannot be explained by infection but only by the inheritance of the tuberculous diathesis, and he complains of the "anti-social disregard for national eugenics in the conduct of medical men who can write to the public press that the marriage or

[1] Published by Dulau and Co., 37, Soho-square, London, W. Price 3s.

even intermarriage of members of tuberculous stocks is of no social detriment, provided they live with a good supply of fresh air." An interesting point subsequently touched on is the heavier incidence of tuberculosis in the older offspring of tuberculous parents as compared with the younger offspring.

PERICOLITIS.

IN the *Medical Chronicle* for April Mr. W. H. Newton publishes a graduation thesis on Pericolitis, a condition which has received little attention, and its literature is still very scanty. In 1890 Windscheid first described a disease characterised by acute swelling on the right side of the abdomen, fever, and pain which he thought was due to circumscribed peritonitic exudation around the ascending colon.[1] Pericolitis may occur in any region of the colon. The commonest site is the descending colon, especially the lower part. Dr. H. D. Rolleston has described this form as "Pericolitis Sinistra"[2]—a condition which produces symptoms resembling those of appendicitis but on the left side of the abdomen. In the majority of cases constipation plays a prominent part in the production of pericolitis but in some cases there is no history of it. Of the pathology little can be said, because there is a lack of post-mortem data. Dr. Rolleston suggests that fæcal accumulation gives rise to inflammation of the mucous membrane and other coats of the colon and, by extension to local peritonitis. There is an objection to this view; inflammation of the mucous membrane would probably cause diarrhœa but in the majority of cases constipation exists. A hypothesis which escapes this objection is that hard fæcal masses cause small tears or abrasions of the mucous membrane and allow the passage of microbes into the submucous tissues, whence they are carried by the lymphatics into the connective tissue surrounding the colon and set up inflammation. This is comparable to the spread of inflammation from the uterus in perimetritis. Another hypothesis is suggested by the fact that in a certain proportion of the subjects of constipation acquired diverticula of the colon are found. The fæces tend to accumulate in, and to enlarge, these diverticula. Thus, a condition somewhat resembling that of the vermiform appendix arises and an inflammation analogous to appendicitis may occur. Severe inflammation may occur around a diverticulum and an abscess may be formed or perforation of a diverticulum into the peritoneal cavity may take place, producing general peritonitis. Another cause of pericolitis is injury. In two cases recorded by Mr. D'Arcy Power there was a history in one of kicks and in the other of blows on the abdomen. Other causes are leakage from ulcers (typhoid or stercoral) of the colon. As pointed out by Dr. Rolleston, the symptoms may be divided into three groups—(1) those of slight local peritonitis; (2) those of local abscess; and (3) those of general peritonitis. In the case of the first group resolution may occur, leaving no trace of the inflammation, or the inflammation may become chronic. But intestinal obstruction may result. Mr. W. Arbuthnot Lane has stated that he has often seen on the operating table the ascending colon, especially near the hepatic flexure, bound down to the abdominal wall by adhesions the result of constipation.[3] Some cases, he says, have been operated on under the diagnosis of appendicitis; the appendix was sometimes found normal, sometimes slightly diseased. After its removal the symptoms continued and were relieved by dividing adhesions around the hepatic flexure of the colon. Similar adhesions may also occur in the descending colon. The treatment in simple cases consists of rest in bed and the relief of the constipation by enemata, or the removal of scybalous masses by mechanical means may be necessary. If the pain is severe hot fomentations or the application of an ice-bag may be required. In the chronic cases with adhesions it may be necessary to open the abdomen and to divide the adhesions. Afterwards the bowels must be kept freely acting, for if the constipation recurs adhesions may re-form. In intractable cases Mr. Arbuthnot Lane has advised anastomosis of the ileum to the sigmoid flexure or rectum. In cases of abscess the abdomen should be opened and the abscess drained. In cases of general peritonitis immediate closure of the perforation and drainage of the abdomen are indicated.

[1] Deutsches Archiv für Klinische Medicinische, Band xlv.
[2] THE LANCET, April 1st, 1905, p. 856.
[3] THE LANCET, Jan. 17th, 1903, p. 153.

THE EPIDEMIOLOGY OF MALTA FEVER.

Colonel David Bruce, R.A.M.C., has summarised succinctly the remarkable results obtained by the commission sent out to Malta by the Royal Society to investigate and if possible to find out the cause of Malta fever.[1] Colonel Bruce passes in review all the chief peculiarities of the disease; as regards its geographical distribution he shows how it has disappeared from Gibraltar and how it is found in South Africa, China, India, the Philippine Islands, and America. The clinical symptoms are briefly detailed, such as its long, irregular temperature curve and the presence of rheumatic and neuralgic features. It has long been known also that the better the social position the greater is the liability to the disease. It is a disease prevalent all the year round in Malta, although markedly increasing in summer. It is not, as until recently was supposed, restricted to the neighbourhood of the Grand Harbour, but is very generally distributed over the entire island. How great is the invaliding caused by it is manifest from the yearly incidence of 37·6 per 1000 amongst the soldiers and 28·5 per 1000 amongst the sailors, and as the average duration of the illness is four months, 624 soldiers and sailors are in hospital 120 days, which makes 74,880 days of illness. The members of the commission set to work to determine how it was that the micrococcus Melitensis left the body, how it behaved outside the body, and how it again gained entrance into the body, and as the result of their inquiries they determined that it left the body by the urine. Outside the body the organism was found to be fairly resistant to external influences, except to direct sunlight which killed it in a few hours. Does it gain an entrance by contact? No case has been known of its arising among the patients, orderlies, or nursing sisters from any of the patients invalided home to our naval or military hospitals. The commission also failed to find any evidence that inhalation of infected dust or mosquitoes played any prominent part. But Malta fever can be conveyed to healthy animals by way of the alimentary canal. A single drink of fluid containing but few micrococci almost certainly gives rise to the disease. But the commission at first saw no reason for suspecting the water-supply or any particular foodstuff. At length, however, it was discovered that the goats in Malta acted as the reservoir of the virus of this fever, for 50 per cent. of these animals in Malta responded to the agglutination test and actually 10 per cent. were found to be secreting the micrococcus in their milk. Monkeys fed on milk from an infected goat, even for a day, almost invariably took the disease. The example of Gibraltar clinches this opinion that the infection is propagated by the goats, for the disappearance of Malta fever from the Rock is associated with the disappearance of the Maltese goat from the Rock. Preventive measures in accordance with this discovery were begun in Malta in June, 1906, and a remarkable diminution of the fever at once set in;

[1] Recent Researches into the Epidemiology of Malta Fever. By Colonel David Bruce, C.B., F.R.S., R.A.M.C. (reprinted from the Journal of the Royal Army Medical Corps, March, 1907). London: John Bale, Sons, and Danielsson, Limited. 1907. Pp. 11.

the cases have dropped to one-tenth of what would have been their normal number, whilst since goats' milk has been forbidden in the Royal Naval Hospital not a single case has occurred or can be traced to residence in the hospital. The commission of the Royal Society would thus seem to have made a most valuable discovery. Colonel Bruce considers that Malta now has a chance of being converted from one of the unhealthiest stations of the British navy to one of the most salubrious, and the expectation is founded upon solid arguments. The Royal Society and the members of the commission are to be congratulated on the investigation.

A TWIN OVUM IN A TUBAL PREGNANCY.

IN THE LANCET of March 30th, p. 881, Dr. Allan F. Rutherford described a very interesting case of a twin ovum in a tubal pregnancy which he had removed by abdominal section. This condition is one of considerable rarity but a sufficient number of cases have now been recorded to show that in this variety of multiple gestation the two ova may be situated in the same tube, or one in either tube, or an intra-uterine may be associated with an extra-uterine pregnancy. When the two ova are found in the same tube most commonly there is one fœtal sac common to the two. Unfortunately, it is not quite clear from the description of Dr. Rutherford's specimen whether the two ova were contained in a single chorion with a single placenta or not, although the illustration shows that each fœtus was inclosed in its own amnion. A not inconsiderable number of cases have now been described of a tubal twin pregnancy with a single fœtal sac, but very few have been met with in which the two ova in separate sacs were attached to different portions of the same tube. Some instances of this arrangement have, however, been reported, one of the earliest being that of Boehmer cited by Webster, in which the tube was enlarged in two different parts, one of which contained an early ovum and the other an ovum converted into a mole. In a case recorded by Saniter one ovum was situated in the isthmal portion of the tube and had apparently reached the third or fourth week of development, while the other sac in the neighbourhood of the abdominal ostium contained an ovum four centimetres long. Twin ova enveloped in the same fœtal sac form, as we have said, the commonest variety and have been found not only in the early but also in the later months of an extra-uterine gestation. In a case described by Krusen the condition was one of triplets, the three fœtuses, all about the second month of development, being found in the blood mass of a hæmatocele, the burst sac occupying the ampulla of the tube. In a most remarkable case recorded by Folet, in which the extra-uterine sac probably had existed for some 16 years, both fœtuses were mummified. One had attained almost full term, while the second, which was flattened out against the sac wall, was of the size of a three months fœtus; there was a single placenta. That the fœtuses in most of these observations are of very different degrees of development is no doubt to be explained by the imperfect growth of the two placentæ, the direct result of their extra-uterine attachments, since unequal development of twins in utero is of relatively uncommon occurrence. The third combination in which both tubes are involved in the pregnancy has so far only been met with in the early months of pregnancy. One of the best known cases is that of Walter; in this instance both tubes contained a hæmatoma in one of which there was a fœtus six centimetres long in the amniotic cavity, whereas in the other the amniotic cavity was compressed and empty in the middle of the blood mass. In a case recorded by Werth an operation undertaken for the removal of a hæmatocele of recent formation revealed the presence in the opposite right tube of an unruptured tubal gestation. In another case operated upon by the same surgeon the left tube contained a hæmatoma and the right tube, the abdominal end of which was closed by old adhesions of some standing, a fœtal sac with no trace of any embryo. In this case it appears probable that the ovum contained in the right tube may have come from the left ovary by internal migration, judging by the fact that the obliteration of the abdominal end of the right tube appeared to date from a period anterior to the commencement of the twin tubal pregnancy. These varieties of multiple pregnancies are of much interest and all such cases should be carefully recorded.

EPIDEMIC CEREBRO-SPINAL FEVER.

THE epidemic of cerebro-spinal fever continues without much alteration in its incidence. In London during the last few days one case has been reported in the borough of Finsbury and one in the borough of Stepney. Since March 26th, when the order requiring the notification of the disease came into operation, 24 cases have been reported to the London County Council. Cases have also occurred at Liverpool, at Smethwick in Staffordshire, at St. Germans in Cornwall, at Chilvers Coton in Warwickshire, at Whitwell in Derbyshire, at Newburn in Northumberland, at Wrexham in Denbighshire, and at Crewe in Cheshire. In Scotland during the week ended April 20th there were 18 deaths from the disease registered in Glasgow, ten in Edinburgh, six in Leith, two in Greenock, and one in Dundee. The weekly return of the Glasgow sanitary department issued on April 19th showed that there were at that time 112 cases under treatment. In Edinburgh from March 1st to April 22nd there were 66 cases with 42 deaths. Other cases have occurred at Plains near Airdrie, at Haddington, at Kirkcaldy, and at Kirkintilloch. In Belfast 30 fresh cases have been reported during the past week. There has now been in this city a total of 313 cases with 200 deaths.

FURTHER EFFECTS OF RECENT LEGISLATION ON THE DRUG TRAFFIC IN THE UNITED STATES.

IN the March number of the *American Journal of Pharmacy* further evidence is given of the salutary effects of the Pure Food Act, to which reference was made in THE LANCET of Feb. 9th, p. 373. Since the Act has become effective the products of certain large packing houses, which were formerly labeled "potted ham" or "potted tongue," now bear the names "potted meat, ham flavour," and "potted meat, tongue flavour." The substance has not been changed but it is now designated by its right name. Again, for many years the public in the United States have been deceived into buying coffee from which "the poisonous caffeine and the poisonous tannic acid have been removed." Preparations such as these are impossible to prepare without completely destroying the properties of the coffee and it is satisfactory to find that under the new law they are amenable to the section on misbranding. Turning to drugs, one of the most important effects of the Act consists in the numerous changes that have been made in well-known nostrums which formerly contained alcohol, morphine, cocaine, chloral hydrate, cannabis indica, acetanilide, and other drugs of a poisonous nature named in the Act. As a declaration of the presence of any of these drugs must now be made on the label the manufacturers have generally altered the formulæ rather than admit their presence. The medical profession as much as the public has been fooled in this way. Mixtures of acetanilide and other ingredients which were formerly exploited as definite chemical compounds are now being sold as mixtures and, in some cases at least, their composition has been totally changed. Thus, ammonal now bears upon the label the name "ammonium phenylacetamid" and it is

admitted to contain "240 grains of paracetyl-phenetidin" (in plain English, phenacetin) in each ounce. In regulating the sale of narcotic drugs a strong blow has been struck at one of the most insidious evils of the nostrum traffic. Instances have come before the authorities at Washington, e.g., in the case of several remedies for catarrh, in which manufacturers have brazenly admitted the addition of morphine or cocaine to their nostrums in order that their continued use might be assured. It is almost incredible that a manufacturer should stimulate the sale of his wares in this way and grow rich by the production of thousands of narco-maniacs. But unfortunately a similar condition of things obtains in this country at the present time without a legal remedy. In regard to self-drugging, the full extent of the mischief is only known to members of the medical profession. A more stringent control of the sale of food and drugs, especially the latter, is called for in this country, but it will require strong hands to pilot a satisfactory measure. It would be easy to control the manufacturers; the main difficulty rests with the advertising managers of newspapers.

FATAL AIR EMBOLISM FROM PUNCTURE OF THE LIVER WITH AN ASPIRATING NEEDLE.

IN the *Journal of the Royal Army Medical Corps* for April Lieutenant N. Low, R.A.M.C., has reported a case of a rare accident in puncture of the liver for abscess. A thin, sallow gunner was admitted into hospital on May 9th complaining of pain in the right shoulder. He had not felt well for three months. The evening temperature was 102·2° F. The lower border of the liver could just be felt below the ribs. In the scapular line dulness extended up to the eighth rib. On the 11th the liver dulness had increased so as to extend three fingers' breadth below the costal margin. On the 13th it was proposed to explore the liver. Under chloroform an aspirating needle three inches long was inserted in the lowest intercostal space in the anterior axillary line and pushed into the liver. Instantly there was a loud hissing noise as of air being sucked in and respiration stopped. One or two feeble beats were felt at the wrist and then the pulse stopped. Lieutenant Low put his thumb over the end of the needle to prevent any further entrance of air. When the air rushed in the right side of the face twitched sharply for a moment, the pupils widely dilated, and the face became livid. Attempts at resuscitation failed. At the necropsy one and a half pints of blood were found in the peritoneal cavity. The right cavities of the heart were filled with frothy blood and air bubbles. The base of the right lung was adherent to the diaphragm above an abscess in the right lobe of the liver. The liver was much enlarged and weighed 116 ounces. The needle puncture was in the right lobe two inches above the lower margin; a small clot adhered to it. On cutting down upon a probe passed into the wound it was found that a large branch of the portal vein had been opened. On squeezing the liver frothy blood and air bubbles issued from the vein. The upper portion of the right lobe was occupied by an abscess of the size of the fœtal head, containing 32 ounces of pus and surrounded by a fibrous wall a quarter of an inch thick.

THE Oliver-Sharpey lectures of the Royal College of Physicians of London will be delivered by Dr. W. D. Halliburton on Monday and Tuesday, April 29th and 30th, at 5 o'clock, at the College, Pall Mall East, the subject being New Facts in Relation to the Processes of Nervous Degeneration and Regeneration.

THE Department of Public Health of Queensland in a bulletin dated March 16th reports a case of bubonic plague in a male aged 23 years, who was attacked on March 10th. In the same bulletin the health officer of Port Douglas reports 6 fresh cases of plague admitted to the hospital during the week ending March 16th. As regards the Mauritius a telegram from the Governor received at the Colonial Office on April 19th states that during the week ended April 18th there were 2 cases of bubonic plague and no deaths from the disease.

WE have several times alluded to the fact that a committee has been sitting to discuss the possibility of starting a coöperative plan by which medical men can be insured upon favourable terms against the risks of the Workmen's Compensation Act, 1906. The negotiations with various insurance companies have been tedious, but the definite result of the work of the committee will shortly be published.

THE INTERNATIONAL BUILDING TRADES EXHIBITION.

THE International Building Trades Exhibition, which was held at Olympia from April 6th to 20th, was a great success and we take pleasure in recording this fact since the exhibits in so many instances were striking illustrations of hygienic advances. Public health, indeed, was written large on almost every stall, and the visitor intent on acquainting himself with new departures in sanitary applications in relation to house construction ought to have been very pleased with what he saw, while a satisfactory feature of the exhibition was that the demonstrations were in many instances illustrative of the attempts being made to bring domestic comforts framed upon sanitary principles within the reach of the poorer classes. A very interesting section also which concerns the comfort of us all was that known as the "Surveyor" section in which were shown examples of the way in which roads are "metalled" and of the attempts to deal with motor problems. Besides, there were illustrations and working models of water-supply, refuse collection and disposal, sewage disposal, and other departments of municipal engineering work.

We do not pretend to give more than a short reference to those exhibits which seemed to us to be of direct sanitary significance, seeing that in the words of the organisers "the whole of the spacious building, ground floor, gallery, and even the annexe, was crowded to the last available inch with exhibits—a record for a trade exhibition in any part of the world." It speaks well for the energy of those responsible for it that such an exhibition should have been got together, but one disparaging word we are bound to add: the ventilation of the vast building left much to be desired. The interest of the exhibition was marred by a stagnant impure air; the crowd of visitors was great and many complained of a splitting headache, which may safely be attributed to the dust and foul air present.

Amongst the first exhibits brought to the notice of the visitor were specimens of a beautiful material for rendering floors fireproof shown by the Stonwod Fireproof Flooring Company, Limited, of 109, Victoria-street, Westminster, London, S.W. The floors are stated to be warm to the feet, fire-resisting, and proof against water and dampness. They have been employed in hospitals, schools, and factories. Illustrations of the application of fireproof sheeting known as Dovetail corrugated steel sheeting were given by the Fireproof Company, Limited, of 10, York Buildings, Adelphi, London, W.C. A device for obviating dampness and decay was exhibited by Mr. A. W. Andernach (agency, 30, Patshull-road, Kentish Town, London, N.W.), consisting of the Kosmos grooved slabbing, as it is called, which acts by encouraging a circulation of air in the walls themselves. Specimens of slag wool and silicate cotton as a vehicle for fireproof partitions were shown by Messrs. Fred Jones and Company, of 1, 2, and 3, Perrin-street, Ryland-road, London, N.W. Messrs. Elkay and Comes, of Bath House, 59, Holborn Viaduct, London, E.C., have recently introduced a very ingenious folding bath in various types for mansion or cottage. The cabinet folding bath, made of enamelled sheet steel, is designed for bedrooms or dressing-rooms and when

not in use the bath tips up into the cabinet and the floor-space then occupied is 2 feet 1 inch deep and 2 feet 9 inches wide. In the same way a folding bath without cabinet is made for villas, bungalows, artisans' dwellings, servants' quarters, &c. This can be fitted in a 2-feet cupboard or in a recess. An exhibit which attracted a good deal of attention was that of Messrs. Thomas Potterton of the Cavendish Works, Balham, London, S.W. It consisted of a model of a domestic hot-water service in a large mansion worked from the "Rex" kitchener, no second fire being needed for warming the various rooms in the house, since these are provided with radiators on the same service. The Patent Adjustable Bath Company of 31, Broad-street, Birmingham, exhibited a specimen of their tip-up bath as in use at the employees' cottages at Messrs. Cadbury's works at Bourneville. The Silicate Paint Co. of Charlton, London, S.E., presented to view a model cottage decorated inside and out with "Duresco," a washable wall paint made durable, as its name implies, by a silicating process. The Newellite Glass Tile Company, Limited, of Shenton-street, Old Kent-road, London, S.E., exhibited specimens of glass tiles which, while presenting a clean impervious surface, are said to be free from the tendency to craze or crack and to be specially adapted for hospital construction. The sanitary exhibits of the Sanitary Appliances Syndicate, Limited, of 68, Victoria-street, Westminster, London, S.W., were very numerous and comprised "The Only" silent closet fitted with polished brass valve and gun-metal working parts. The utmost flush necessary is two gallons and there is no ball valve. Several modifications of this closet were shown, all designed to meet sanitary requirements and to eliminate offence; as well as gullies, tidal valve and traps for drain connexions, inlet air valves, urinals with hand-flushing arrangement, flushing cisterns, and domestic water tanks possessing some claim or other from a hygienic standpoint. Examples of Hall's washable sanitary distemper were given at the stall of Messrs. Sissons, Bros., and Company, of 199B, Borough High-street, London, S.E., while close by were "well" fires shown in working order by the Wellfire Company of 33, Dover-street, Piccadilly, London, W. Messrs. John Knight and Sons of 24, Gertrude-street, King's-road, Chelsea, London, S.W., exhibited their cast iron inspection and disconnecting chambers for drainage work, besides their sealed internal gullies and manhole covers. Messrs. G. A. Williams and Son of 21, Queen's-road, Bayswater, London, W., brought to the notice of the visitors their patent open-air sleeping chamber and their "invisible" outside blind. The Gypsum Mines Company, Limited, of Mountfield, Robertsbridge, Sussex, showed specimens of their "Sirapite" Plaster which was used in the London hospitals for restoring interior walls and as a backing for glazed tiling. The patent bucket fire extinguisher of Messrs. Messer and Thorpe of 54, 56, and 58, Gedling-street, Dockhead, London, S.E., is well worth mentioning and consists of a number of fire buckets telescoped together which can be so submerged in water that on being taken out they each and all come out full. A somewhat revolutionary and attractive proposal in regard to methods of domestic heating is that of Messrs. James Prior and Co. of the Empire Works, Holliday-street, Birmingham, who gave a working demonstration of the method of heating bedrooms and hall with the waste heat from the sitting-room fire by means of the "Venetian" grate and heat distributor. The London Warming and Ventilating Company, Limited, of 20, Newman-street, London, W., exhibited their ingenious "Florence" warm-air and ventilating grate. The smoke is drawn through the fire to a point where it becomes incandescent and the automatic shaking bins clean the fire of ashes and dust, thus providing free access of air at a high temperature through the fuel. A very handsome exhibit, comprising a series of model bathrooms with the latest patterns of sanitary appliances, was shown by Messrs. Shanks and Co., Limited, of 81, New Bond-street, London, W. The porcelain enamel used in the baths calls particularly for a word of praise. The exhibit included urinals, lavatory sinks, and basins. Messrs. Davis, Bennett, and Company of the Westminster Sanitary Works, Horseferry-road, London, S.W., exhibited a number of luxurious sanitary appurtenances, including bath-rooms, water-closets, lavatories, and so forth. The Ajax basins and sinks of the Ajax Sanitary Company, Limited, of 49, Stamford-hill, London, N., are well worthy of mention, inasmuch as these sanitary apparatus illustrate an important improvement consisting of an outlet and overflow passage in a recess at the back, front, or side, and a shutter or sliding valve. As might have been anticipated, Messrs. Doulton and Company's exhibit (Lambeth Potteries, London, S.E.) was most comprehensive and included a really handsome display of sanitary appliances, such as bath-room fittings, lavatory accessories, water-closets, sinks, drains, and glazed pipes, besides an installation of fireplaces and mantelpieces in glazed ware.

In the "Surveyor" section Messrs. Horsfall of Lord-street works, Whitehall-road, Leeds, exhibited a model of their "tub-feed" refuse destructor, as well as of their "cupola" type destructor and a forced draught smoke-consuming furnace. The exhibit included some specimens of clinker flags, &c. Close by were various specimens of "tarmac," shown by Tarmac, Limited, of Ettingshall, Wolverhampton. "Tarmac" is manufactured from iron-stone slag, impregnated with tar oils. Roads made with it are said to be free from dust, mud, or grease. The Ames-Crosta Sanitary Engineering Company, Limited, of City Chambers, South Parade, Nottingham, exhibited their sewage disposal specialities, including the "Simplex" automatic sewage sprinkler and the "Coleman" automatic sewage valve worked by a mercury balance. The "Ames" tiles also should be mentioned as a simple device for ensuring drainage and aeration of bacteria beds and for the flooring of water filter beds. The Candy Filter Company of 5, Westminster Palace-gardens, Artillery-row, Westminster, London, S.W., exhibited plans and drawings of installations of the Candy patent automatic compressed air and oxidising water-works filters as well as samples of "oxidium," a mineral oxidising substance for purifying water. At the same stall were working models of the Candy-Whittaker sewage distributor. Messrs. Ham, Baker and Co., of 13, Grosvenor-road, Westminster, London, S.W., similarly exhibited their ingenious travelling sewage distributor for rectangular filter-beds and a number of other sewage engineering appliances. "Tarspra" of Tarspra, Limited, of 20, Victoria-street, Westminster, London, S.W., is said to have solved the "dust" and "skid" problem of the roads. Hundreds of miles of roads, it is stated, can be treated with "tarspra" in a few weeks. Mr. William E. Farrer of Star Works, Cambridge-street, Birmingham, exhibited his improved automatic sewage distributor, which appears to be particularly well adapted for small installations—as, for example, country houses. Close by was a working model of the "Sterling" refuse destructor (Messrs. Hughes and Co., 7, Arundel-street, Strand, London, W.C.), which is said to do its work very effectually and without causing the slightest nuisance. An example of obtaining power from waste could be seen in the destructor of Messrs. Heenan and Froude of 4, Chapel-walks, Manchester. In the same section Messrs. George Jennings, Limited, of Lambeth Palace-road, London, S.E., exhibited a number of "up-to-date" appliances connected with the disposal of sewage, while Messrs. Defries and Son, Limited, of 146 and 147, Houndsditch, London, E.C., exhibited illustrations of their Equifex steam disinfecting appliances. The latest form is fitted with an automatic apparatus by which no record can appear on the automatic recording gauge until the evacuation of air from the disinfection chamber is complete, thus preventing disinfection from being imperfectly carried out with an admixture of air and steam.

Altogether the exhibition was of the greatest interest from a hygienic point of view, and we have no doubt that it was very generally supported and appreciated by the building trades.

BRITISH MEDICAL BENEVOLENT FUND.

AT the March meeting of the committee 19 applications for assistance were considered and sums amounting to £193 voted in relief of 18 of the cases, one being postponed for further inquiries. Two annuities of £20, vacant through death, were filled by the election of approved candidates. Appended is an abstract of the cases which were helped:—

Daughter, aged 50 years, of late M.R.C.S. Health too indifferent for regular work. Slight help from a relation. Voted £5.

Widow, aged 63 years, of L.F.P.S. Glasg. No income. Very bad health. Dependent on a daughter who is a waitress. Relieved once, £12. Voted £6.

Daughter, aged 57 years, of late M.D. Aberd. Dependent on small and decreasing earnings from teaching music. Health indifferent. Voted £10.

Daughter, aged 74 years, of late M.R.C.S. Only income five guineas a year from a charity. Health indifferent and sight failing. Voted £12.

Wife, aged 42 years, of L.R.C.P., L.R.C.S. Edin. Applicant's husband has practised for many years as assistant in Lancashire but lost his reason a few months ago and is now confined in an asylum. No income. Two children at school. Voted £15.

Daughter, aged six years, of late L.R.C.P., L.R.C.S. Edin. At father's death, two years ago, applicant had to go to the workhouse but has been removed by an uncle of extremely small means. Voted £9, payable to the uncle.

M.D. Edin., aged 62 years. Used to be well provided for but lost his capital through the failure of a home for inebriates and other misfortunes. Is now unable to practise on account of ill health. No children. Voted £18.

Daughter, aged 65 years, of late M.D. Unable to obtain remunerative work on account of age. Relieved nine times, £79. Voted £12.

Widow, aged 47 years, of M.R.C.S., L.S.A. Supports herself as a housekeeper and is obliged to help an invalid son. Relieved eight times, £100. Voted £10.

Widow, aged 35 years, of L.R.C.P. Edin. Endeavours to support herself by nursing. Two children, aged 12 and three. Relieved three times, £30. Voted £10.

Widow, aged 56 years, of L.F.P.S. Glasg. Nine children, of whom six are self-supporting and able to give a little help but three still dependent. Relieved eight times, £120. Voted £5.

Widow, aged 59 years, of M.R.C.S. Eng. No income; children unable to help; health very indifferent. Relieved once, £12. Voted £12.

Daughter, aged 64 years, of late M.R.C.S. Only income an annuity of £20 from a charity. Relieved twice, £12. Voted £6.

Widow, aged 60 years, of L.R.C.S. Edin. Income £18 a year. Receives a little help from a son. Is in very bad health. Relieved five times, £50. Voted £12.

Widow, aged 44 years, of L.R.C.P., L.R.C.S. No income; slight help from a son, who is a sailor. Relieved three times, £27. Voted £12.

M.R.C.S., L.S.A., aged 67 years. Has been incapacitated for some years by paralysis and heart disease. Receives a small superannuation allowance. Eight children, only able to give slight help. Relieved five times, £75. Voted £15.

Widow, aged 46 years, of M.B., C.M. Income £20 a year; receives slight help from her father-in-law and takes boarders. Seven children, aged 16 to eight. Health indifferent. Relieved eight times, £90. Voted £12.

Daughter, aged 49 years, of late M.R.C.S. Income £3 a year; practically disabled by an accident. Relieved once, £5. Voted £12.

Looking Back.

FROM

THE LANCET, *SATURDAY*, April 25th, 1829.

FOREIGN DEPARTMENT.

M. BROUSSAIS.

WE are glad to see, that the gastro-enteritido mania of our neighbours is at last gradually subsiding; indeed, whatever share M. Broussais' arrogance* may have had in securing to his doctrine the extraordinary applause it met with, this was, we apprehend, still more owing to the commodiousness of his principles. How could it be otherwise than acceptable to many, at once to render unnecessary the study of pathology and therapeutics, by proclaiming gastro-enteritis to be the only disease, and the application of leeches as the only remedy.

Our readers will be greatly amused by a description of the manner in which the medical practice is carried on at the Hôpital Val de Grace; taken from the inaugural dissertation of a young physician who attended there as a pupil.

"When I," he says, "was appointed one of the dressers at the hospital, I had but a very incorrect notion of the 'doctrine physiologique.' It having, in this capacity, become my duty to examine and prescribe for the patients, who had been admitted after the regular morning visit of the physician, I was not a little uneasy at my responsibility, until one of my colleagues set my mind perfectly at ease, by the manner in which he managed the affair. The only thing was to ask how many new patients there were in attendance, and then to order a sufficient number of leeches, to allow thirty for each patient. Thus armed, he went through his wards, where he had only the trouble of applying his leeches either to the abdomen or to the anus, an alternative which had already been settled by the 'infirmier,' who asked each patient at his entrance, whether he had diarrhœa or pain in the abdomen, and in the former case, placed a piece of oil-cloth between the legs, in the latter, over the abdomen; by these symbols, the young practitioner knew at once where to apply his thirty leeches, whether to the anus or abdomen, and, indeed, he hardly ever had to complain of incorrectness in the 'infirmier's' diagnosis and plan of treatment."

* In the preface to the second edition, he modestly observes, that he considers his theory at least as valuable an acquisition to mankind, as the discovery of the cow-pox!

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 9206 births and 5149 deaths were registered during the week ending April 20th. The annual rate of mortality, which had been equal to 17·9 and 16·9 per 1000 in the two preceding weeks, further declined to 16·8 in the week under notice. During the first three weeks of the current quarter the death-rate in these towns averaged 17·2 per 1000, the rate during the same period in London being only 16·8. The lowest rates in the 76 towns last week were 4·6 in Hornsey, 9·4 in Coventry, 9·5 in Handsworth, and 10·0 in Hastings; the rates in the other towns ranged upwards to 24·3 in Ipswich, 24·7 in Wigan, 24·8 in St. Helens, and 27·2 in Hanley. The 5149 deaths in the 76 towns showed a further decline of 47 from the numbers in the two preceding weeks, and included 506 which were referred to the principal epidemic diseases, against 569 and 544 in the two previous weeks; of these, 216 resulted from measles, 155 from whooping-cough, 44 from diphtheria, 35 from diarrhœa, 33 from scarlet fever, 23 from "fever" (principally enteric), but not one from small-pox. No death from any of these epidemic diseases was registered last week in Plymouth, Southampton, Hornsey, York, or in eight other smaller towns; the annual rates from these diseases, however, ranged upwards in the other towns to 4·0 in Birkenhead, 4·6 in Middlesbrough, 5·1 in Bolton, and 5·9 in Nottingham. The fatal cases of measles in the 76 towns, which had been 251 and 228 in the two previous weeks, further declined last week to 216; they caused the highest annual death-rates, 3·1 in Middlesbrough, 3·6 in Nottingham, 3·7 in Bolton, and 4·0 in Birkenhead. The 155 deaths from whooping-cough were fewer by 16 than the number in the previous week; they were proportionally most numerous in West Hartlepool, Nottingham, Salford, and Tottenham. Diphtheria showed the greatest fatality in Swansea, Rochdale, and Reading; diarrhœa in Middlesbrough; scarlet fever in Sheffield, and "fever" in Wigan. No case of small-pox has been under treatment in the Metropolitan Asylums Hospitals since the end of June last. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2686 and 2637 in the two previous weeks, had further declined to 2628 at the end of the week under notice; 361 new cases were, however, admitted during the week, against 352 and 296 in the two preceding weeks. The deaths referred to pneumonia and other diseases of the respiratory organs, in London, which had been 412 and 355 in the two previous weeks, further declined to 326 in the week under notice, but exceeded by 15 the corrected average number in the corresponding week of the five years 1902–06. The causes of 47, or 0·9 per cent., of the deaths registered during the week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leeds, in Bristol, West Ham, Bradford, Newcastle-on-Tyne, and in 53 other of the 76 towns; the proportion of uncertified deaths, however, again showed considerable excess in Birmingham, Liverpool, Sunderland, South Shields, and Rochdale.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been equal to 19·4 and 20·2 per 1000 in the two preceding weeks, declined again to 20·0 in the week ending April 20th, but exceeded by 3·2 the mean rate during the same week in the 76 large English towns. The rates in the eight Scotch towns ranged from 10·6 and 15·8 in Paisley and Aberdeen to 22·2 in Glasgow and 25·6 in Leith. The 695 deaths in the eight towns were within five of the number returned in the previous week, and included 133 which were referred to the principal epidemic diseases, against numbers increasing steadily from 100 to 124 in the five preceding

weeks. These 133 deaths were equal to an annual rate of 3·8 per 1000, which exceeded by 2·2 per 1000 the rate from the principal epidemic diseases in the 76 English towns; they included 54 from whooping-cough, 42 from "fever," 17 from measles, 17 from diarrhœa, two from diphtheria, one from scarlet fever, but not one from small-pox. The 54 fatal cases of whooping-cough were within one of the high number in the previous week, and included 41 in Glasgow, six in Edinburgh, three in Aberdeen, and two in Dundee and in Greenock. The 42 deaths referred to "fever," showed a decline of seven from the number in the previous week, but included 21 in Glasgow, ten in Edinburgh, six in Leith, four in Greenock, and one in Dundee; 18 deaths were certified from cerebro-spinal meningitis in Glasgow, ten in Edinburgh, six in Leith, and two in Greenock. Of the 17 fatal cases of measles eight occurred in Glasgow, five in Leith, and four in Edinburgh. 12 deaths were attributed to diarrhœa in Glasgow, three in Edinburgh, and two in Dundee. The deaths in the eight towns referred to diseases of the respiratory organs, including pneumonia, which had been 109 and 118 in the two preceding weeks, declined to 103 in the week under notice, and were 37 below the number in the corresponding week of last year. The causes of 30, or 4·3 per cent., of the deaths registered in the eight towns during the week were not certified or not stated; in the 76 English towns the proportion of uncertified deaths did not exceed 0·9 per cent.

HEALTH OF DUBLIN.

The annual rate of mortality in Dublin, which had been equal to 28·3 and 26·6 per 1000 in the two preceding weeks, rose again to 27·1 in the week ending April 20th. During the first three weeks of the current quarter the death-rate in the city averaged 27·3 per 1000, the rates during the same period did not exceed 16·8 in London and 17·3 in Edinburgh. The 203 deaths of Dublin residents during the week under notice exceeded by four the number in the previous week, and included 18 which were referred to the principal epidemic diseases, against 15 and 19 in the two preceding weeks; of these, ten resulted from measles, seven from whooping-cough, one from diarrhœa, but not one either from small-pox, scarlet fever, diphtheria, or "fever." These 18 deaths were equal to an annual rate of 2·4 per 1000, the rate during the same week from the principal epidemic diseases being 1·4 in London and 3·5 in Edinburgh. The ten fatal cases of measles exceeded the number returned in any recent week; and the seven of whooping-cough corresponded with the number in the previous week. The 203 deaths from all causes included 34 of children under one year of age and 48 of persons aged upwards of 60 years, each of these numbers showing a decline from those returned in the previous week. Four inquest cases and two deaths from violence were registered; and 84, or 41·4 per cent., of the deaths occurred in public institutions. The causes of three, or 1·5 per cent., of the deaths in Dublin last week were not certified; the percentage of uncertified deaths during the week did not exceed 0·9 in London, while it was 8·4 in Edinburgh. The 170 deaths registered in Belfast during the week under notice included 27 referred to cerebro-spinal fever or cerebro-spinal meningitis.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Fleet Surgeon Joseph Crowley has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets in His Majesty's Fleet (dated March 17th, 1907).

In accordance with the provisions of Her late Majesty's Order in Council of April 1st, 1881, Fleet Surgeon Harold Frederic Dale Stephens and Fleet Surgeon George Wilson have been placed on the Retired List at their own request.

The following appointments are notified:—Fleet Surgeon: G. A. Dreaper to the *Nelson*. Surgeon: R. F. MacMahon to the *Pembroke*.

ARMY MEDICAL SERVICE.

Lieutenant-Colonel Thomas F. MacNeece, from Royal Army Medical Corps, to be Colonel, vice E. H. Fenn, C.I.E., retired (dated Feb. 16th, 1907). Lieutenant-Colonel William Babtie, V.C., C.M.G., from Royal Army Medical Corps, to be Colonel supernumerary to Establishment, on appointment as Inspector of Medical Services (dated March 12th, 1907).

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel Reynolds P. Hetherington is placed on temporary half-pay on account of ill health (dated April 19th, 1907). Captain Richard E. G. Phillips retires, receiving a gratuity (dated April 24th, 1907). Lieutenant Winfrid K. Beaman is seconded under the provisions of Article 349, Royal Warrant (dated Jan. 28th, 1907).

Lieutenant-Colonel G. W. Brazier-Creagh, C.M.G., from Woolwich, has been posted to the Northern Command at Lichfield. Lieutenant-Colonel R. S. F. Henderson has been appointed to Netley Hospital, vice Lieutenant-Colonel G. E. Twiss.

INDIAN MEDICAL SERVICE.

The King has approved of the following promotions among officers of the Indian Medical Service: Lieutenants to be Captains (dated Jan. 30th, 1907): Hugh Basil Drake, Ernest Charles Hodgson, William Sim McGillivray, William Gillitt, William Frederick Brayne, Charles Harrison Barber, William Tarr, Merwan Sorab Irani, Hugh Watts, Ivor Davenport Jones, Walter Taylor Finlayson, Seymour Whitworth Jones, William Thomas McCowen, Hugh Ellis Stanger-Leathes, John Anderson, Edmund Arthur Roberts, Geoffrey Gratrix Hirst, Michael Joseph Quirke, John Morgan Holmes, and Maurice Forbes White.

IMPERIAL YEOMANRY.

Oxfordshire (Queen's Own Oxfordshire Hussars): Surgeon-Lieutenant-Colonel H. P. Symonds is granted the honorary rank of Surgeon-Colonel (dated March 14th, 1907). Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel H. P. Symonds resigns his commission, with permission to retain his rank and to wear the prescribed uniform (dated March 15th, 1907).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 2nd Sussex: The undermentioned Surgeon-Lieutenant-Colonels are granted the honorary rank of Surgeon-Colonel: H. Colgate (dated Dec. 1st, 1906) and H. Habgood (dated Dec. 1st, 1906).

Rifle: 1st Volunteer Battalion the East Yorkshire Regiment: The undermentioned to be Surgeon-Lieutenants: Oswald Lucas Appleton (dated Feb. 9th, 1907); and Percy Roberts Ash (dated Feb. 19th, 1907). 1st Volunteer Battalion the Royal Scots Fusiliers: Surgeon-Lieutenant-Colonel W. Wilson is borne as supernumerary whilst holding the appointment of Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, Scottish Border Volunteer Infantry Brigade (dated March 13th, 1907). 2nd London Volunteer Rifle Corps: Henry Kay Ramsden (late Surgeon-Captain, 2nd Battalion, Royal Guernsey Militia Light Infantry) to be Surgeon-Captain (dated March 5th, 1907). 2nd (Renfrewshire) Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders): Surgeon-Lieutenant G. W. Coats resigns his commission (dated March 12th, 1907).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Eastern Command: Maidstone Companies: William Henry Flint to be Lieutenant (dated March 18th, 1907). 2nd London Volunteer Infantry Brigade Bearer Company: William Bain to be Lieutenant (dated March 7th, 1907).

THE COLONIAL CONFERENCE.

The Colonial Conference, if it has not led to the establishment of an imperial council as a necessary step preliminary to the organisation of a plan of imperial defence, has nevertheless gone a considerable way in that direction. It has decided upon holding its meetings every four years and upon forming a new permanent consultative and informative body to act between the motherland and the colonies. The Prime Minister is in future to preside over the Conference. One question before the Colonial Conference has been that of the military defence of the Empire and the discussion which ranged over the military systems of Great Britain and various colonies.

UNIVERSAL MILITARY TRAINING.

A system of universal and uniform physical training and military drill has, it is announced, been already inaugurated in Canadian schools. Earl Roberts has strengthened the hands of the National Service League by the publication in book form of the various speeches and addresses he has felt constrained to make during the last 18 months upon our present unpreparedness for war and the way in which, as he has so strenuously advocated, it should be met and overcome.

Correspondence.

"Audi alteram partem."

THE USE OF ALCOHOLIC BEVERAGES.

To the Editors of THE LANCET.

SIRS,—In view of the fact that six out of eight letters on "The Use of Alcoholic Beverages," published in the two preceding numbers of your journal, have all insisted on the need for evidence to support the contentions of the 16 signatories to the manifesto, I had hoped that this week's issue would have contained letters from one or more of these gentlemen dealing specifically with this point. Instead, two additional letters have now brought the total to eight correspondents who have in this respect a like desire. While the one letter published by one of the authors of the manifesto disregards this central question, that has most obviously been the dominant one in the majority of his fellow practitioners' minds.

THE LANCET is a medical publication, published for, and read mainly by, medical men, though it has, as is well known, a wide circulation among the better educated individuals of the general public, yet it is as a technical paper that its policy has always been determined. Surely, therefore, the demand for evidence for any medical manifesto published in your columns has peculiar force and ought not to be disregarded. All reasonable medical men will sincerely regret any bigotry that has been shown to any of the signatories to the manifesto. But the serious evil that excessive drinking causes to the nation is some excuse, though no justification, for its existence; and, moreover, this bigotry of some abstainers is, of course, largely the inevitable result of a reaction against established prejudice on the part of those who are not abstainers. With neither of these feelings are medical men concerned. We are, or ought to be, interested directly with the medical and indirectly with the social aspects of the problem. And as we all have personal opinions on the matter and all, who have any practice at all, much experience also, we want carefully sifted scientific evidence to consider the reliability or the unreliability of the newer research work which has given its verdict so largely against alcohol. Such statements as the two published in to-day's issue that abstainers are often large meat-eaters and that alcohol has some food value are not calculated to reassure other medical men of the competence of those who would give us a re-statement of the old view of the subject. Eastern countries like Japan are both abstaining and largely non-meat-eating, as compared with Western countries that are both, and it is the dangerous disadvantages of alcohol, not its small food advantages, that evidence is needed upon. Many of us would be quite willing to modify our views, but as scientifically trained men we require definite data to affect us, and our social responsibilities are such that to feel otherwise would be criminal. As no competent medical man would deny that alcohol is on occasion of service in the treatment of disease, and that for this purpose the various beers, wines, and spirits on the market may have each their special value, the whole point of the manifesto turns on the one question—its value in health.

In my letter published in THE LANCET of April 13th I mentioned eight independent specific lines of evidence which have all tended to establish the belief that alcohol is in some degree harmful to health; other correspondents took up similar positions. Now suppose it can be established by *new* facts that these eight converging groups of studies are all fallacious, it has still further to be proved that alcohol is not socially injurious if we are to accept the position that the manifesto defines. For it is certain "moderate" drinking does lead ultimately in many individuals to "excessive" drinking, and this is admitted to be an evil. We are justified, therefore, in asking the signatories to supply us not only with evidence to confute research students on the eight points I have alluded to, but also to inquire what remedy they would propose to check the development of the craving in those by nature predisposed to its power before we as social and individual medical advisers can sanction its usage as a national beverage. It ought surely to be evident that scientific evidence and not personal opinion must alone ultimately decide the issue, and I would respectfully ask of the signatories for direct data to be produced on the question which they themselves have voluntarily brought before the medical world.

I am, Sirs, yours faithfully,

Willesden Green, N.W., April 20th, 1907. J. LIONEL TAYLER.

To the Editors of THE LANCET.

SIRS,—It is refreshing to read the common sense of Mr. Edmund Owen on the subject of "temperance." Every word of his letter is fully justified by the remarks of other of your correspondents, particularly by that most sarcastic letter of Dr. J. W. Carr. Dr. Carr actually writes: "Many medical men who up to now have been endeavouring to inculcate temperance principles on their families and patients will doubtless in the future teach the necessity for moderate drinking." What, in the name of sobriety, is "temperance" but moderation in drinking? But this would make the above profound sentence if not meaningless then decidedly tautological. Mr. Owen says, with perfect truth, that "the rank and file of our profession are one and all in favour of temperance," and I for one claim, with Dr. Carr and Mr. Owen, to be a teacher of temperance to my family and patients, but I drink cider or a glass of claret with my meals and even occasionally a glass of whisky-and-water with a friend at night. Several correspondents have remarked that we medical men see more than any others the evil effects of intemperance. True; but, on the other hand, are not nine-tenths—nay, nineteen-twentieths—of our personal friends, of those whom we most respect and love, men who, like ourselves, use intoxicating beverages in moderation? If words mean anything this is true "temperance." Doubtless, abuse leads to disaster, in the case of intoxicants to terrible and widespread disaster, but to condemn entirely and universally the use of wine for this reason is headstrong and savours of fanaticism.

So the vegetarian urges the universal disuse of animal food because of the admitted evils resulting from excess of nitrogenous diet and because some find themselves better if they eat no meat. Or take another analogous case. Who but the medical man knows so well the dire results of sexual intemperance? But is total abstinence therefore the only true remedy? At various periods of the world's history there have been fanatics who have maintained that it is, but in this case everyone recognises that they *were* fanatics, or would Dr. Carr say that I cannot rightly claim to inculcate sexual temperance because I have a family of my own?

I am, Sirs, yours faithfully,

Bromsgrove, April 23rd, 1907. CAMERON KIDD.

To the Editors of THE LANCET.

SIRS,—I should like to know whether Mr. Edmund Owen and his co-signatories of the manifesto approve of the use that is being made of their names by "the trade"? Are they aware that a reprint of the manifesto with names attached is being distributed to customers in public houses? Do they know that a firm that pushes the sale of a certain stout has added a copy of the manifesto to one of its circulars which also contains a garbled and misleading extract from Sir Michael Foster? It is certain that the use of the manifesto in this way, which is, of course, what many of us expected, will tend seriously to increase the use of alcoholic beverages, any force that the last paragraph of the manifesto might possibly have with a few notwithstanding.

I am, Sirs, yours faithfully,

THOMAS RUSHBROOKE, M.A. Cantab., M.R.C.S. Eng.

Stamford Hill, N., April 24th, 1907.

To the Editors of THE LANCET.

SIRS,—Dr. Burns, the secretary of the London Temperance Hospital, judging from the tenour of his letter, appears to be swayed by the popular sentiment that a few eminent medical men with the capture of their names on his side will settle this vexed question, whereas it must be decided on the weight of evidence. Meantime it is certain that so long as the total abstinence party constitute themselves the sole judge and jury and advocate of their own cause no unbiased judgment can possibly be arrived at. Why, may I ask, should not this complex question be submitted to

some impartial tribunal, somewhat analogous to a Royal Commission, who could in a judicial spirit analyse and test the evidence which the teetotal party seem to think so convincing and conclusive. Take, for instance, the oft-repeated testimony of those insurance companies, who inform the world that between total abstinence and moderate drink the former is in favour of longevity, when it must be obvious that no company (unless indeed they employ detectives in plain clothes) can guarantee any of their general section as moderate consumers of alcohol. Further, much stress, as everybody knows, is placed upon alcoholic excess by alienists as a cause of insanity. What evidence is there, however, on the other hand, to prove that the judicious use of alcohol in many cases may not in the wear and tear of everyday life afford some ballast to the overwrought nervous system and prevent a total collapse? May it not act thus in advancing years when the natural pride and enthusiasm of life which affords a healthy stimulus to younger minds has vanished and no longer acts upon the aged and prosaic? I ask what evidence is there to show that in these cases moderate stimulants may not ward off, or at least lessen the chances of, senile dementia? In a letter which appeared in the *Times* brimful of significance from the late Lord Grimthorpe, which I can corroborate from the observation of somewhat identical conditions, the following statement occurs which, although not scientific evidence, is possibly more trustworthy in some respects:—

> The late Mr. Proctor the astronomer at one time took up teetotalism and preached it as an infallible dogma in *Knowledge*. I warned him from my own experience, as he was a hard worker with his head, and he laughed at it. Within six weeks he recanted and told me I was right. I forget whether he published his recantation. I have known sundry other "brain workers" try the experiment and I have never known more than one who had not to recant.

Surely evidence of this kind is of moment.

I am, Sirs, yours faithfully,

Brighton, April 15th, 1907. CLEMENT H. SERS.

To the Editors of THE LANCET.

SIRS,—Each one of us must be conscious of the gulf dividing the apologist for strong drink from the apostle of total abstinence in this one regard—namely, that the apostle, however narrowly intolerant, is at least impelled by an ideal and believes firmly in the ultimate usefulness of his cause. Can the same possibly be said for the apologist who encourages those around him to alcoholic habits, however harmless? How, in the face of the natural proclivity to immoderation, can medical men presume to recommend what they know to be productive of infinitely more harm than good? It is far less a question of abstinence than of common sense and I would ask if anyone can for a moment hold that the normally constituted and healthful individual would suffer from the immediate removal of all intoxicating liquors from the globe. There are those who pretend to believe that a nation may owe her supremacy in part to the influence of alcohol; who can even imagine a proof of this? But it is terribly easy to trace the misery consequent on strong drink. Let men be honest; strychnine is helpful and alcohol too in subduing pathological conditions, but for the strong man these are needless. I follow the fashion and add my delicate confession of being no stranger to wine, but of this I make no boast.—I am, Sirs, yours faithfully,

BOSWALL DODDS, M.D. Edin.

Starcross, Devonshire, April 21st, 1907.

To the Editors of THE LANCET.

SIRS,—Mr. Edmund Owen in his letter in THE LANCET of April 20th touches upon the most important point of the controversy to my thinking. He asserts that no sane person ever drinks alcohol and he would as soon think of drinking paraffin or naphtha. And yet as far as I can gather most of the so-called scientific investigations on the subject have been based upon the use of pure diluted or undiluted alcohol—that is to say, the experiments have been made with C_2H_5OH + or − H_2O and nothing more. To say that these experiments represent accurately the action of beer, wine, and spirits is, it seems to me, tantamount to saying that the action of a few grains of caffeine dissolved in distilled water is equal to that of a cup of tea. There is something else besides alcohol in wines, beers, and even spirits, just as there is something else besides caffeine in a cup of tea.

I am, Sirs, yours faithfully,

April 23rd, 1907. CHEMICUS.

THE CONDITION OF THE BLOOD-VESSELS DURING SHOCK.

To the Editors of THE LANCET.

SIRS,—Professor Wenckebach's contribution in your issue of April 13th, as coming from an acknowledged and distinguished authority, is, to say the least of it, astonishing. He relates a case in which a full dose of digitalis produced an almost impalpable pulse, together with "well-filled, extremely hard, and wildly beating throbbing carotids," phenomena in which he seems to find something obscure. What else, one wonders, did he expect would occur? The effect of digitalis is to produce contraction of the arteries. The arteries are endowed with contractility in decreasing measure as we pass from the periphery to the centre. The radial is further from the centre than the carotid. The same influence which would cause the former to contract tightly, would therefore allow the latter to retain, substantially, its normal calibre. The pulse in the one would thus be almost imperceptible, while the increased pressure would cause the other to become "well filled, extremely hard, and wildly beating." The learned professor goes on to inquire "who will tell what the blood pressure has to be *in* the contracted radials at the wrist," and wishes to know if I am sure that it will be found high in that portion of the arterial system. In reply, I beg with all due humility to say that I have been always taught to believe that the pressure of a fluid in the nozzle of a tube is certainly not less than the pressure in the tube itself. But what all this has to do with the condition of the blood-vessels in shock it is for me quite impossible to discover.

In your issue of March 23rd I invited Mr. J. D. Malcolm to point out any fallacies in one of the arguments by which the present view is sustained. He replied in your issue of March 30th with two statements. In your issue of April 13th I maintained that these, so far from exposing any fallacies, displayed, in the one case, a lack of mental perspective, and in the other, a physiological inexactitude. In your current issue Mr. Malcolm re-states his first proposition, and, in reply to my criticism of his second, while attributing to me opinions which I have never held and never expressed, he states that the "fallacy" resides in the fact that I failed to make myself clear. I do not therefore propose to continue the discussion.

I am, Sirs, yours faithfully,

London, W., April 20th, 1907. LEONARD WILLIAMS.

THE SALUBRITY OF THE THAMES VALLEY.

To the Editors of THE LANCET.

SIRS,—The Thames Valley has for a long time borne a traditional reputation of being unhealthy, and several London specialists have been in the habit of advising their patients to avoid its supposed miasmatic influences. Like many other traditions, however, it can be demonstrated that this, too, rests on no solid foundation. Take one or two patent facts. No public school in England is more healthy than Eton, and that noble institution lies in the very heart of the Thames Valley. At some 50 feet above the level of the Thames and about a mile distant from Eton stands the little town of Slough, in the parish of Upton. As to the salubrity of this town let the medical officer of health, Mr. E. Weaver Adams, F.R.C.S., be called as witness. In his official report for 1906 he states that the death-rate in the town was only 10·2 per 1000, while the death-rate in 142 other small towns in England was 14·4 per 1000. And further, there were only 17 "notifiable cases" of illness amongst residents in Slough in the whole year (1906). This is a very remarkable record, and it certainly proves that the place does not deserve to bear an evil repute, though it be in the Thames Valley. It should be added that gravel, thoroughly well drained, is the predominant stratum of the district, and consequently the streets and roads become dry very rapidly after rain.

Lastly, if it be conceded that sunshine contributes greatly

to health I learn from an experienced meteorologist resident in Slough that the town enjoyed "bright sunshine" for nearly 15 hours a day in four of the spring and summer months in 1906. Could many of the usual health resorts show a better record? I am, Sirs, yours faithfully,

AN OCTOGENARIAN RESIDENT IN THE THAMES VALLEY.

April 22nd, 1907.

*** Our venerable correspondent has right on his side. The Thames Valley is often spoken of as unhealthy by the public, though we were not aware that this view had medical endorsement. Slough may suffer from its name, which is associated in the public mind with "bog" and "morass." The proper name of Slough is Upton; it lies high above the Thames on a gravel soil, and is a remarkably healthy town.—ED. L.

SOME TURKISH LAZARETS

AND OTHER SANITARY INSTITUTIONS IN THE NEAR EAST.

BY THE BRITISH DELEGATE ON THE CONSTANTINOPLE BOARD OF HEALTH.

(*With Reproductions of Photographs taken by the Author.*)

I.

Sketch of the General Scheme of Maritime and Frontier Sanitary Defence of the Turkish Empire.—The History of the Camaran Lazaret.—The Villages on Camaran Island.—The Numbers of Pilgrims Interned and the Nature of the Measures Applied.

BEFORE proceeding to describe the sanitary stations visited by the Commission, it will be useful to give a brief account of the entire system of maritime and frontier sanitary defence in the Turkish Empire. The Constantinople Board of Health has under its management a series of lazarets, a small number of simple disinfecting stations, and a large number of sanitary offices. The lazarets, of which there are nine, are large and complex establishments, in which quarantines, disinfection, and other sanitary measures are applied. Their names and positions are indicated in the

Small sketch map of the Turkish Empire, showing position of the lazarets and disinfecting stations, existing and proposed.

accompanying sketch map. There are two in the Black Sea—Sinope and Kavak (at the entrance of the Bosphorus); three in the Mediterranean—Clazomene, near to Smyrna, Beirût, and Tripoli on the African coast; two in the Red Sea—Abu-Saad, near to Jeddah, and Camaran; one, that of Basra, in the Persian Gulf; and one, that of Khanikin, near the Turco-Persian frontier.

There are two disinfecting stations in existence, those of Jaffa and Rhodes, and it is proposed to construct five others, respectively at Trebizond in the Black Sea, Salonica in the Ægean, Volona on the Adriatic coast, Yanbo in the Red Sea, and at Kizil-Dizé on the Turco-Persian frontier. At these stations medical visit, disinfection, and even a period of observation not exceeding 24 hours are applied. They are of great use to navigation, as in their absence ships would have to go to one of the lazarets to undergo these measures, and this often involves the ship making a long detour, with corresponding loss of time and money.

The sanitary offices are 135 in number, scattered along the coasts and land frontiers of the whole empire. In 44 there are medical officers, and here ships can undergo "medical visit"; in 91 there is no medical officer, and at these ports ships merely undergo the ordinary sanitary interrogation and pay their sanitary dues.

The lazaret of Camaran was the first and largest of those visited by the Inspection Commission. It is probably one of the largest and most important sanitary institutions in the world, since it is destined to receive the majority of Moslem pilgrims coming to the Hedjaz from countries situated beyond the Straits of Bab-el-Mandeb.

The island of Camaran upon which the lazaret is built is situated off the coast of the Arabian province of the Yemen, about 15° north of the equator, at a distance of some 40 sea-miles to the north-west of Hodeidah, four to the west of Salif, and 20 to the south-west of Loheia. It is separated from the mainland by a channel, which in its narrowest part is not more than one and a quarter sea-miles broad. It is a coral island, some 18 kilometres long from north to south, and from three to eight kilometres wide from east to west. Its surface has all the characters of the desert; flat in some parts, undulating in others, and rising in some to a height of several metres above sea-level.

The history of the steps which led to the choice of this island for the quarantining of pilgrims from the east on their way to Mecca and Medina is of interest. The earliest proposal for the creation of an institution of this nature was made by the International Sanitary Conference held in Constantinople in 1866. That conference decided: (1) that a sanitary establishment should be created near the entrance of the Red Sea; (2) that the international character of this establishment was a *sine quâ non*, the form to be given to the institution and to the measures to be applied there being left to the Governments interested, and it being suggested that the lazaret should be placed under the direction of either Turkey or Egypt, but under the control and with the assistance of Europe; and (3) that the measures applied there would be based on an international regulation and executed by an authority placed under the control of the Governments interested. When the next International Conference met in Vienna in 1874 these decisions were incorporated in the convention which followed; but it was not until some seven years later that steps were taken to give effect to them. In the meantime two Commissions had been sent by the Turkish Government to inspect the coasts and islands in and near the southern portions of the Red Sea, with a view to selecting a suitable site for the new lazaret. The first explored, in 1867, a large number of possible sites on the Red Sea shores of Arabia, and finally decided to recommend the island of Camaran as offering on the whole the greatest number of advantages. The second, sent three years later, with instructions to examine the coasts between Perim and Mokalla—that is to say, the southern coasts of Arabia outside the Straits of Bab-el-Mandeb—reported in favour of Sheikh-Said, a small bay at the very entrance to the Red Sea, and just opposite to Perim.

In 1881, when cholera broke out again at Mecca, the Constantinople Board of Health decided to improvise at Camaran a small lazaret where the inhabitants of the Yemen returning from the pilgrimage were to be quarantined before proceeding to their homes. This measure appearing to have given good results the board decided in the following year to build a permanent and large lazaret, where all arrivals from India would be quarantined before going on to the Hedjaz. It took another two years to bring the lazaret into being, and that institution was both more primitive than the present one and occupied a site more to the south. The present establishment may almost be said to date from some ten years back, when the large sum of £T.81,500[1] was voted for the "refection" of the Camaran lazaret. In the course of two or three years most of this money was spent, and the buildings and installations to be described in these articles were thus brought into existence.

To return to the description of the island and lazaret. The latter is built on the east coast of the island, facing the mainland. There is here a bay, which cuts into the island for a distance of about 1000 yards and is about 600 yards wide. On the southern shores of this bay is the large village of Camaran; on its northern shores are the administrative

[1] A Turkish pound (£T.) is equivalent to about 18*s*.

and other so-called "central" buildings of the lazaret, the camps for the pilgrims forming an irregular line, some four and a half kilometres long from south to north, and running more or less parallel with the eastern shores of the island. The village of Camaran is said to contain about 5000 inhabitants. It is not the only one on the island; there are indeed five others, called respectively Yemen, Fourra, Mekrem, Seila, and Seifaf; but none of them are of any size, the largest containing only 35 and the smallest only five houses. These villages are occupied by an Arab population, mostly employed in fishing for, or trading in, pearls, which are found in considerable numbers in this region.

While most of the island is desert there are several oases where palm-trees of various kinds flourish. In all parts of the island, wherever the least depression in the ground allows the sand to retain some humidity there is an abundant and very characteristic desert flora. A great variety of shells and coral is found here and the bird life is remarkably varied and interesting. The climate is pleasant in winter but the heat in summer is said to be very great.

The lazaret of Camaran is supposed to be open only for the six lunar months of the Moslem Pilgrimage—viz., those of Redjeb, Shaban, Ramazan, Shewal, Zilcadé, and Zilhidjé. As the Moslem year is composed of only 12 lunar months it is shorter by some 11 days than the true solar year. Hence any Moslem date is about 11 days earlier each successive year. It follows that the pilgrimage season may fall in spring, summer, autumn, or winter. At the present time it falls mainly in autumn and winter; the 1st of Redjeb last year fell on August 21st, and the three days of Kurban Bairam, in which the fêtes at Mecca culminate, were in the latter half of January, 1907. During the remaining half of the year the staff of the lazaret is reduced to the smallest number compatible with the surveillance and upkeep of the various buildings and installations. All ships carrying a number of pilgrims exceeding 5 per cent. of their net tonnage should go to Camaran; those with less may go to the much smaller lazaret of Abu-Saad, near to Jeddah. As a matter of fact, most, if not all, ships from the north, even if they carry more than 5 per cent. of pilgrims, go to the Abu-Saad lazaret. The total number of pilgrims quarantined at Camaran in the last 25 years is shown in the following table. It will be seen that the number varies greatly from year to year; thus in 1882 there were only 9067; in 1903–04, and again in 1905–06, the total exceeded 32,000.

Table showing the Total Number of Pilgrims Quarantined at Camaran in the last 25 Pilgrim Seasons.

Year.		Pilgrims.	Year.		Pilgrims.
Of the Hegira.	A.D.		Of the Hegira.	A.D.	
1299	1882	9,067	1312	1895	23,378
1300	1883	20,016	1313	1895–1896	30,448
1301	1884	12,746	1314	1896–1897	14,210
1302	1885	17,303	1315	1897–1898	15,229
1303	1886	15,031	1316	1898–1899	14,075
1304	1887	13,707	1317	1899–1900	11,155
1305	1888	20,932	1318	1900–1901	18,336
1306	1889	18,723	1319	1901–1902	17,729
1307	1890	20,184	1320	1902–1903	15,822
1308	1891	23,464	1321	1903–1904	32,452
1309	1892	24,032	1322	1904–1905	22,349
1310	1893	31,907	1323	1905–1906	32,116
1311	1894	22,417	—	—	—

For many years past all pilgrims from India have been subjected to ten days' quarantine at Camaran. Those from an infected port in any other country, whether disease has broken out on the ship or not, undergo the same period of quarantine. Ships from the Dutch Indies, Ceylon, Straits Settlements, Persian Gulf, and some other countries are regarded as "suspect" and do only five days' quarantine. The other measures applied consist of a thorough disinfection of the pilgrims' clothes and baggage, a douche bath for the pilgrims themselves, and a cleansing and disinfection of the ship and crew. The pilgrims pass their quarantine in camps, to be described later; while there they undergo a medical inspection twice a day in order that any case, or suspected case, of cholera, plague, or other disease may be at once detected and isolated. If such a case occurs the patient is removed to hospital; the rest of the pilgrims in the infected camp do 12 days' quarantine for the first case, and ten for any subsequent cases, before they are allowed to leave the lazaret and proceed to the Hedjaz. They are thoroughly disinfected before leaving and no pilgrim is allowed to depart unless the medical officers of the lazaret are satisfied that he is free from infection.

(To be continued.)

THE MILK-SUPPLY OF LONDON: SOME PERSONAL OBSERVATIONS UPON ITS RAILWAY TRANSPORT.

(FROM A CORRESPONDENT.)

II.[1]

The Milk Can.—The Milk Van.—The Milk Train.—The Regulations in Respect of Milk Transport.—The Delivery of Milk at Paddington Station.

MILK reaches the metropolis either by special milk trains or by ordinary goods and passenger trains, but in all cases the can in which the milk is contained is of the familiar shape. It is universally employed and so becomes an important article in milk transportation. The milk can, which is frequently and wrongly termed a churn, is usually of about the same size and the same shape on all our home railroads running into London. It is about two and one half feet in height, round in shape, with a broad base gradually narrowing towards the top, where it expands again into a broad brim. It has a capacity varying from 14 to 17 gallons. It is provided with a closely fitting lid with a fastening arrangement at the side, and in the majority of cases there is a raised portion in the centre of the lid containing holes for ventilation. The shape of the can has its reasons: it can be easily cleaned and handled with comparative facility, its round shape, expanding below, permitting of it being moved without difficulty by rotation on the edge of its base. On the whole the construction of railway milk cans appears to be sufficiently satisfactory, but there is one grave fault in regard to their use which has, I believe, been made the subject of many strictures already, but with little or no effect. By far the greater part of the milk sent by rail is carried in unfastened cans. Indeed, it would be no great exaggeration, I think, to state that not more than one can in 1000 of all that are brought into London by the railroads is locked or sealed. There are arrangements for locking the cans but they are habitually overlooked. That it would be better for the general public if cans were locked while being conveyed by rail or while deposited on the platforms of stations is obvious. Sealing or locking of milk cans should surely be made compulsory as a means of protection to the consigner and the consignee. At present the bulk of the milk which reaches London may be tampered with in transit, dirt may obtain entrance to the can on account of the lid being opened, dishonest persons may abstract the milk with any beastly sort of vessel, and may replace the stolen milk with any beastly sort of water. I have seen on more than one London railway station platform milk cans with lids unfastened and partly opened, allowing free ingress to the various kinds of dirt which must abound in London stations. I am simply unable to understand why both consigner and consignee do not agree, the one never to send, the other never to accept, any cans that can be thus tampered with in transit, and I am of opinion that if those pecuniarily interested cannot take such an obvious step in self-protection that our sanitary authorities should compel them to take it for the protection of the public. There is an impression that railway companies are opposed to cans being sealed while in their charge, but I have conversed with many of the officials and as far as I have been able to ascertain the impression is altogether erroneous.

The regulations in vogue with respect to milk transport are practically the same for all the railroad companies which enter London. Each can must have the number of imperial gallons it is capable of containing marked upon it and the inside of each can must be marked to indicate the space occupied by eight gallons and by each additional gallon.

[1] No. I. was published in THE LANCET of April 20th, 1907, p. 1116.

In the case of the few "sealed" cans, instead of the inside of the can being marked each can must bear its "tare" conspicuously stamped thereon outside. The officials of the railway company have the power to open any cans during transit and, if necessary, to detain the same for a reasonable time, in order to ascertain if the quantity of milk therein agrees with the quantity declared; but this is a reasonable precaution for them to insist upon. We may be sure that such inspection would only be put into practice where there were grounds for suspicion that the company was being defrauded, for neither the farmer, the purveyor, nor the public would tolerate the milk-supply of London being subjected to any system analogous to the proceedings of an American Custom House.

The Great Western Railway is the largest carrier of milk to London and the first station which I visited when I made up my mind to gather together my random ideas as to milk transportation was Paddington. Although milk is conveyed to the metropolis from almost all the districts over which the line has running powers, the greater part of it is brought from localities comparatively near to London, from Wiltshire, from Buckinghamshire, and from Berkshire. For the transport of milk the Great Western Railway employs special trains and passenger trains, but by far the greater part of the milk is carried in special trains. Three of these special trains are at the present time being run during the 24 hours, two of which arrive in London in the early hours of the morning, while one arrives about 10 A.M. I awaited the arrival of one of the early morning trains. It consisted of 23 milk vans, each van carrying 30 cans, so that the total cargo of milk, allowing 16 gallons to a can, would be 13,440 gallons. If the other two milk trains carried an equal quantity, the amount of milk brought into Paddington daily by special trains would be 40,320 gallons. The vans in common use are of strong construction, about 20 feet in length, 7½ feet in height, and 9 feet in width. Each is provided with open-boarded sides permitting of a through current of air, incidentally admitting the rain. A new type of milk van has been introduced by this railway recently. It is much larger; the sides are close boarded for a height of 2½ feet with louvres above. The close boarding and louvres arrangement excludes wet but admits air. The floor boards of the vans are covered with rock asphalt, which slopes towards a gutter in the middle so that the floors can be easily washed. As far as this railway is concerned, the facilities for transport of milk are consequently such that it should travel in a sanitary state. The special milk trains run at a fair rate of speed from the more outlying districts as far as Reading picking up milk on the way, and from Reading to Paddington the journey is made at express speed. The consequence is that, the distances to be traversed being comparatively small, the milk trains of the Great Western Railway are, for the most part, never long enough on the journey to allow chemical changes in the milk to be produced, while the construction of the milk vans, and especially of the new ones, seems to be well designed to assist in the preservation of the milk in a sweet condition.

But little milk is carried by passenger trains on the Great Western railway compared with the amount that is carried by special trains; none the less the amount of milk conveyed during the year by this means is considerable, and, of course, some of the milk thus transported has to travel long distances. The conditions in which milk is carried by passenger trains is at all times more or less insanitary, and when it is transported for long distances this evil is greatly aggravated. The luggage van in which the cans are placed is not infrequently full of a miscellaneous cargo, some of which may be exactly the sort to promote the tainting of milk, the ventilation is inadequate, the temperature in hot weather will be excessive, neither floor nor walls of such a luggage van will be subjected to any special process of scouring—in short, we have here all the factors calculated to produce chemical changes in the milk. I saw at Paddington station no particular example of milk being conveyed in a van that was obviously in an unfit state, but as all the milk conveyed in these vans appeared to be in unsealed or unlocked cans it is certain that any opportunities of soiling offered by the method of transport would have a full chance of becoming effective. I saw many cans full of milk with their lids partly opened, and of all the cans that I observed I did not see one which was sealed or locked.

The Great Western Railway has a special platform for the unloading of milk, alongside of which come the dealers with their vans for the purpose of taking it away for distribution. On this platform I saw, regardless of the enormous probabilities offered by the environments, cans freely opened and milk decanted. It is impossible to imagine a more unsuitable place for such a proceeding. I may mention that this never took place when any of the Aylesbury Dairy Company's milk was being shifted, while if I refrain from mentioning the offenders by name it is because I do not know if such practices are accidental or habitual. I was informed both that they often happened and that they never happened, and I have not visited this platform to meet the train in question more than once. Perhaps some of your readers may be able to supply the answer.

(To be continued.)

THE ORGANISATION OF THE MEDICAL PROFESSION IN FRANCE.

(FROM OUR SPECIAL COMMISSIONER.)

(Concluded from p. 912.)

The Maintenance of Discipline.—Penal Sanctions Confirmed by the Tribunals and Medical Men Fined for Breaking their Medical Union Rules.

THE Concours Médical, it has been seen, has served as a parent or a forcing ground for the birth and growth of medical unions in France.[1] To-day the organ of this association of medical men recalls criticisms which it made in 1901 and which it maintains apply with equal force to the present situation. It complained then, as it does to-day, that as the medical unions or syndicates grew in number they became weaker in cohesion and in discipline. It was therefore urged that instead of each medical union having its own rules, which were often imperfect and insufficient, all the unions should have the same rules. These rules should impose duties side by side with the rights which medical men sought to acquire. Again, a central authority should be able to prevent the overlapping of local unions and to establish geographical demarcations so that they should not trespass on each other's domains. Small unions readily followed this advice, notably at Noyon, Saumur, and Château-Thierry. With larger unions it was more difficult. In 1901 the Versailles medical union had already been in existence 15 years. It was a big cumbersome society, stretching over districts that had totally different interests, and the situation was further complicated by the proximity of Paris. It was soon found that a number of medical practitioners had joined with the hope of obtaining as many advantages as possible but with no idea of themselves doing anything whatever for the cause further than the doling out of a small subscription. It did not dawn upon them that they were no longer to endeavour to pay court to the patients of other practitioners, that the object of union was to prevent unfair or unprofessional competition. The fact that a good many members of the union had not entered into the true spirit of union caused unpleasant feelings, suspicion, and hesitation to arise.

Such seeds of disruption had to be extirpated and this with no uncertain, faltering hand. But in France, as in England, the question must be:—How is a member of a medical union to be compelled to fulfil his promises? After a lengthy study of all conceivable ways and means the council of the Federation of the Medical Unions of France came to conclusions of such importance and of such practical interest to the medical profession in all parts of the world that it is worth while to translate the actual text:—

1. In our opinion members of medical unions should represent the *élite* of the profession; they should be medical practitioners who are deeply convinced of the necessity of maintaining the dignity and solidarity of the profession.

2. If they are grouped in sufficiently small districts for each of these regions to have identical interests, the problems daily arising and affecting the medical profession may be settled in a uniform manner. Once such a settlement has been attained, when the agreement has been duly accepted and voted upon, it constitutes a code, and if the articles of this code are not observed and there is no sufficient excuse given, a fault, a misdemeanour, has been committed which exposes the delinquent to a penalty, just as is the case in regard to any other breach of a contract freely made. Then as the guarantee in regard to the damage done to the group or the members who are injuriously affected is readily appreciated by the members of the unions of the entire region, the members are much better able to judge such a matter than the ordinary tribunals, for these latter in such questions are not

[1] See THE LANCET of March 30th, 1907, p. 911, and also of July 18th, 1896, p. 214.

at all competent. The rules of the medical union should anticipate as far as possible the nature of the delinquencies the members may commit. Thus a member when he gives his signature should be fully warned as to the nature of his rights, his duties, the obligations which he contracts to fulfil, the benefits he may hope to obtain, and the penalties to which he exposes himself.

Now this latter clause introduces an important punitive proposal. The principle is that if a person joins a union formed to promote a certain line of action and fails to carry out his undertaking towards it he injures and causes material damage to his colleagues. Therefore, he ought to be condemned for the breach of contract to the payment of damages. But if he were sued before an ordinary court the tribunal, being ignorant of the position of the medical profession and utterly unable to understand the professional interests at stake, would not know how to assess such damages. Therefore the medical union itself must decide what damages shall be paid.

This method of dealing with the question of discipline was adopted by the medical union of the Versailles *arrondissement* or district. Each member of the union was called upon to sign a contract, by which he promised to pay a fine of not less than 16*s.* and not more than £40 if he broke the laws of the union. Of course, there was a great outcry. Such a drastic measure, it was said, would cause many medical men to leave the union; but the answer was given that those who were not thoroughly in earnest had better be outside the union. Then the question was asked, What would happen to a medical man whose practice was on the frontier line of two different unions? The answer was that he must obey the laws of the union in which his patient lived, and if his patients lived in the districts of two different unions then he must conform to the rules of each union when practising on its territory. Of course, this latter difficulty will become insignificant as the various unions adopt similar rules. Those adopted by the Versailles union are likely to serve as a model. The following are some of the more interesting clauses:—

Article VII. deals with the duties and obligations of members and these may be summed up by saying that the duty of the member consists in conforming strictly with the decisions of his union, notably with regard to questions relating to:—

1. Deontology.
2. The prohibition of all acts of illicit competition by means of intrigues, by the solicitation of patients, the abuse of colleagues, the reduction of fees, the forming of political or religious societies established to promote a personal professional interest, &c.
3. To assist spontaneously all fellow members who are in any way menaced or injured.

Again and again the objection was raised that these principles were admirable but that there was no guarantee that they would be applied. Indeed, it was found that some of the best and most honourable members of the profession would not join the medical union. When questioned they replied that it was precisely because they thoroughly approved the principles of the union that they did not join. If they joined they would scrupulously and strictly carry out its rules and regulations; but as there was no guarantee that all the other members of the union would be equally faithful to their principles those who really obeyed the rules would soon find themselves at a serious disadvantage. If, however, an effective guarantee could be given that those who did not keep their pledge would be punished with severity sufficient to render infractions unlikely and of rare occurrence then the best elements of the profession would join readily. Thus it was that at a meeting of the Medical Union of the Versailles District the 50 medical practitioners who were present voted unanimously in favour of the following rules:—

Article IX.—1. The sanctions applied in case the statutes or rules have been broken are only valid when voted by secret ballot at a general assembly and by the relative majority of the members present, and this only after the committee has investigated the matter, heard the parties concerned, and read a written report on the subject. The verdict may be pronounced in default, if the presumed delinquent has been summoned by registered letters to appear first before the committee of inquiry and then before the general assembly, and does not either attend or send a satisfactory explanation.

2. All penalties imposed in default may be challenged before a general assembly within a period of three months of their notification made by a bailiff or a registered letter.

3. These penalties are: a warning, a reprimand, a fine of from 16*s.* to £40, and expulsion, which may be accompanied by a fine. The general assembly shall further decide whether there is just cause to take against the member of the union any legal proceedings so as to obtain damages in case the fine shall not suffice to repair the injury done to the Medical Union. It is the general assembly that inflicts the two last-mentioned penalties, fine or expulsion, as also the taking of legal action, and the general assembly must for this purpose consist of at least two-thirds of the members of the union; then the penalties or legal prosecution can only be inflicted if two-thirds of those present vote in favour of such a course.

4. Unless it is otherwise decided by the general assembly, all inflictions of penalties shall be inscribed in the minute book. They shall receive the usual publicity and the interested party shall not, in regard to such publicity, be able to take any action in law to recover damages from the Medical Union.

5. The fact that a member is expelled from the union does not exempt him from his responsibilities and from the payments or penalties to which he was previously liable.

Seeing the very great importance that the meetings of the general assembly should, in such circumstances, be well attended there is a special rule on this subject. It states that there shall be each year at least two obligatory general assemblies: one of these shall be followed by a banquet and at the other the election of officers and the payment of subscriptions shall take place. Every member who cannot attend must send a written excuse and pay a fine of 1 franc. If he fails to do this then he must pay a fine of 5 francs. Of course, exceptions are made in case of serious illness or other imperative cause of absence. But when there is a disciplinary assembly—that is to say, when an important verdict has to be rendered for or against a member of the union—then those members who fail to attend without sufficient excuse may be fined as much as 20 francs, or 16*s.*

It will be seen by these rules that the duties of a member of the Versailles Medical Union are treated very seriously and that membership does really involve a grave responsibility. But all this would have been of comparatively little importance if the rules of the medical union had not received a legal sanction. A case, however, did occur where a member of the medical union repudiated his obligations and was consequently summoned before the civil tribunal of Bourgoin. Here and in response to the eloquent pleading of his counsel, Maître Gatineau, the court held that the medical union was justified and that its members must fulfil all the conditions to which they had attached their signatures. This verdict gave new life to the medical unions and in many parts of France their rules were revised with a view to their enforcement if necessary before the law courts. This was notably the case with the Federation of the Medical Unions of the Department of the Nord, of the Pas-de-Calais, of the Jura, the Deux-Sèvres, the Creuse, and the Vendée, and also in the creation of a new union at Lorient.

In England this example might be of considerable value, for the difficulties and the problems at issue are almost identical. In France, as in England, it is the want of solidarity that constitutes the weakness of the movement. A medical practitioner may or, if he prefers, he may not belong to the local union of his profession. If he does join he may or he may not carry out the rules to which he has given his assent; the acceptance of the rules are not so arranged as to involve the signing a contract which it would be illegal to break? Undoubtedly one of the most effective weapons against a member of the profession who acts in an unworthy manner is some form of unfavourable publicity. In France a claim for damages would not hold if the plaintiff had on joining the medical union signed his acceptance of a set of rules which stipulated, among other things, that publicity should be given to any verdict pronounced against him by the medical union. There is assuredly something to be done by converting certain reprehensible acts into breaches, not merely of medical etiquette or of medical ethics, but of contracts which have been formally entered into before witnesses; the action of the French court is therefore very suggestive.

It is also interesting to note how the French medical unions propose to deal with young practitioners newly arrived in a district and with others who refuse to join the local medical union. Here is a set of rules:—

Article I.—Whenever a new colleague arrives and instals himself within the zone of the medical union his arrival shall be notified to the secretary by his nearest neighbour, who shall at the same time suggest what, in his opinion, would be the best means of inducing the newcomer to join the medical union. The syndic of the region will then receive a mandate instructing him to call upon the newcomer and act according to the advice received; he will endeavour to demonstrate the services the medical union can render to the newcomer and at the same time to warn him as to the faults he might commit.

So long as he has not clearly stated whether or not he will join the union and has not knowingly done any act of hostile competition against the union, the new colleague shall be treated by his rivals with the same consideration as if he was a member of the medical union.

Article II.—The same attitude as that laid down in paragraph 2 in the above article shall be adopted towards every medical practitioner who, though remaining outside the medical union, shall behave in an absolutely correct manner from a professional point of view. Also

endeavours should be made to obtain the aid and advice of such practitioners in all matters of general interest and thus seek to persuade them to join the union.

Article III.—When a medical practitioner who has been installed in the locality for two months, who has not during that time called on his neighbouring colleagues, has, after being fully informed of all the details, refused to our delegate to join our union, and is practising in competition instead of as a member of our combination, the members of the union shall reduce their professional relations with him to the strict minimum imposed by considerations of humanity and of the interests of the sick. None of us should consent to help him, to act in consultation with him, or to collaborate with him habitually. When yielding in a matter of urgency or through a sentiment of humanity it shall be clearly indicated that this is only done in response to an appeal made by the patient and that the exceptional collaboration which the patient may have made us undergo is limited absolutely to what is deontologically correct.

Further, as against the medical practitioner such as we are now dealing with, who is a bad colleague, members of the union may be liberated by a vote of the general assembly from all the consideration and from all obligations which we observe towards those who place professional dignity before commercial competition.

Such are some of the rules and the principles which govern the medical unions of France. As a result the medical practitioners have secured several solid advantages and the whole tone of the profession has been raised. The tendency to introduce in medical practice the methods of competition which prevail among petty tradesmen has been kept at bay, and the principle that science has a higher purpose than mere money-making has on several occasions been successfully vindicated.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Night Shifts in Mills.

As may be known beyond the limits of the district, there has been of late a "boom" in certain branches of manufacture. With the view of metaphorically making hay while the sun shines some of the mills have been running through the night as well as through the day. How far it is for the health and well-being of those engaged in this night work is a matter that need not be considered at present but as a general rule it is not advisable to try to reverse the order of nature, and it should only be attempted when necessity urges. Whether the necessity for making money during the whole 24 hours is sufficiently urgent to justify the attempt is a matter that must be left to those interested to decide but there is another point of view brought forward by a contributor to one of the local papers that is worthy of attention. The writer asks if the pollution of the air by the smoke from the mills is to be allowed to go on during the night as well as the day. He thinks the physique of the working classes in our large towns is already low enough and should not be further lowered because some manufacturers are not content with running their mills by day. There will be no anxiety to keep down the production of black smoke when daylight is gone, but every incentive to careless and wasteful stoking. Night inspectors will have to be appointed and the expense will be borne by oppressed ratepayers who want neither smoke nor inspectors. It is rather hard that the 12 hours usually free from manufacturing smoke should be polluted like the rest of the 24, so that no chance is given for the unfortunate residents to breathe moderately pure air even at night.

Bread-making.

All are interested in bread and, as under modern conditions it is impossible that any but a small fraction of that used by the public can be "home-made," it is satisfactory to know that efforts are being made by bakers themselves to improve the art of bread-making. The Manchester, Salford, and District Master Bakers' Association is holding its fourth biennial northern counties exhibition in St. James's Hall in Manchester. In his opening address the chairman, Mr. Hicks, referred to the classes at the School of Technology for the teaching of scientific baking and confectionery and urged that the bakers should take more interest in the work of those classes. He said that within the last dozen years the whole process of bread-making had been revolutionised and thousands of pounds spent in remodelling bakeries and in providing technical instruction. He boldly claimed that the bread supplied to the public at the present day was absolutely pure. This is, no doubt, true with regard to the best firms, but, as one of the speakers at the opening said, it is only within the last few years that bread-making has been put on a really scientific basis. All this is encouraging and consolatory, but very many years have not passed since the Manchester and Salford Sanitary Association made a report on the Manchester bakeries that was not only alarming but sickening. The underground bakeries, in which half-clothed, consumptive men sweated and coughed and spat through the long hours of night work in filthy, stuffy, ill-ventilated work-places, are now practically done away—for which all concerned cannot be too thankful—but as there are degrees of excellence as to appliances and as to the sanitary conditions under which the work of the bakery is carried on, so there may be a falling back in some cases, and in no occupation is thorough inspection more necessary than in the business of the bakery. Many of the most important firms from different parts of the country exhibit various kinds of flour, so that taste and fancy may be both stimulated and satisfied. It should be mentioned again that the equipment at the Manchester Municipal School of Technology for the teaching of bread-making and confectionery is very fine and complete. The classes are well attended by the students in bread-making, of whom at present there are 78, and at the same time there are 35 who are studying confectionery. The work done is said to be most excellent.

Clerks and Ill-health.

In a lecture at the Manchester Health Society meeting held recently Dr. A. C. Magian drew rather a sombre picture of the health of that large section of the Manchester population, the warehousemen and clerks. He says that nervous disease is greatly on the increase from the constant strain of figure work and the uncertainty as to improving their position or even maintaining it. Foul air and gas fumes are common factors in causing the debility of the desk-workers. Then they get into the habit of sucking ink, sucking and biting pencils, and licking stamps and envelopes, all more or less injurious. Food poisoning is becoming quite common; meals are neglected and irregular, consisting generally of "rubbish and a cigarette." Dr. Magian thinks it would be a good thing if the morning trams to the city were abolished, for some young fellows will not walk or take any healthy exercise. Of course, there are exceptions, but still the picture is widely applicable and is too true. What a boon some physical training and camp drill would be to these pallid, weakly, young men.

April 23rd.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Medical Inspection of School Children.

THE Pontypridd Education Committee was one of the first to realise the importance of obtaining the services of a medical officer, and very soon after the schools in the town came under control the committee appointed the medical officer of health of the town (Mr. Howard Davies) medical officer to the committee. Since his appointment Mr. Davies has carried out systematic inspections and has made valuable reports upon the eyesight of the school children. At the last meeting of the committee it was decided that he should be instructed to visit every department at least once a quarter and to report upon the sanitary condition of the schools and upon the general health of the children.

Bristol Workhouse Infirmaries.

The provision of adequate infirmary accommodation in connexion with the two Bristol workhouses has been under consideration of the board of guardians for nearly ten years. Everyone seems to agree that the wooden huts which are in use at the Eastville Workhouse should be replaced by more permanent and less inflammable buildings, but differences of opinion are at once manifested when definite schemes are propounded. Plans for an entirely new building and proposals for a re-arrangement and extension of existing buildings have from time to time been considered by the board, but for various reasons they have all been rejected. The Local Government Board has now called the attention of the board of guardians to the very unsatisfactory position presented by the inactivity of the latter body. It is probable, therefore, that steps will be taken to put an end to conditions that are not very creditable in a town of the importance of Bristol. The guardians have decided to

appoint a consulting medical officer for the two infirmaries, there being at present a resident medical officer in each infirmary.

The Teaching of Horticulture in Rural Districts.

The Monmouthshire Education Committee has decided that horticulture shall be taught in the public elementary schools in the rural districts of the county. The question of adopting the same course is under consideration by a special committee of the Somerset Education Committee.

Formaldehyde in Milk.

Additional inspectors have recently been employed by the Cardiff health committee in connexion with the milk trade, and the appearance of delinquent milk vendors before the local justices would seem to justify these appointments. In one instance in which formaldehyde was found in considerable quantities in the milk supplied to the infirmary the stipendiary magistrate imposed the maximum penalty of £50 and allowed 10 guineas costs to the corporation.

The Freedom of Falmouth for Sir Joseph Fayrer.

Sir Joseph Fayrer has informed the Falmouth town council that it will afford him great pleasure to accept the offer of the council to present the freedom of the borough to him. The date fixed for the ceremony is August 3rd, when Falmouth will also entertain several members of the British Medical Association.

Winsley Sanatorium.

At a recent meeting of the house committee of the Winsley Sanatorium it was stated that by the new rules certain beds could be allocated to persons residing within the counties of Somerset, Gloucester, and Wilts, on payment of 35*s.* per week, and persons not living within the three counties could be admitted for £2 10*s.* weekly, provided there were vacant beds not required by residents of the three counties.

April 22nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Scottish Vital Statistics.

IN the report of Dr. James Craufurd Dunlop to the Registrar-General for Scotland, which is issued as a Parliamentary Blue-book, it is stated that the population of Scotland at the middle of the year 1906 is estimated to be 4,726,070, of whom 2,305,850 are males and 2,420,220 are females. This estimate is 49,467 more than the estimated population at the middle of the previous year. The total number of births registered in Scotland during 1906 was 131,920. The birth-rate for the year is 27·91 per 1000 and is the lowest rate recorded for Scotland. This is the first year in which the birth-rate has fallen below 28 per 1000. Previously to 1893 the birth-rate of Scotland was always over 30 per 1000. This fall of the national birth-rate, the report states, appears to be largely due to a fall in the birth-rate in the principal town districts, for in them the birth-rate of the year was 28·2, which is 0·7 lower than that of the previous year. Illegitimate births registered during the year numbered 8895 and amounted to 6·74 per cent. of the total births. The number of deaths registered in Scotland during the year 1906 was 75,585, a number which is 1059 more than in the previous year but 2081 fewer than the average number registered annually during the ten previous years. The death-rate for the year per 1000 of the estimated population is 15·99, which is, with the exception of the death-rate of 1905, the lowest recorded for Scotland. A section of the report deals with weather and its influence on mortality. It is stated that the only epidemic observed during the year which may be attributed to weather influences was in September, when diarrhœa was very prevalent, that epidemic being coincident with a spell of hot, dry weather.

The Dangers of Granting Lunacy Certificates.

A dastardly outrage was committed last week upon Mr. John Carswell in the streets of Glasgow. Mr. Carswell was standing on the pavement waiting for a car, when a man approached from behind and attacked him with a revolver. The attack was apparently the sequel to a medico-legal case in November, 1905, in the Court of Session, which aroused widespread interest among the medical profession. The pursuer in the case, William Purves, had been detained in an asylum four months on certificates granted by Mr. Carswell and Dr. Marion Gilchrist. On being liberated he raised action for £10,000 in name of damages from each of the two medical practitioners for alleged unprofessional conduct in certifying him of unsound mind. The judge, Lord Pearson, after a long proof, had no hesitation in finding for the defenders, holding that the certificates were not granted by them wrongfully or without due inquiry, and that the pursuer at the time the certificates were granted was insane and suffering from an attack of subacute mania with homicidal tendency. The defendants, although they won their case, found at the end of the trial that in addition to the vexation and worry entailed they were each out of pocket £600 in the shape of expenses, part of which sum was afterwards refunded to them by the members of the profession in Glasgow and the West of Scotland who subscribed for the purpose. It was by this same man Purves that Mr. Carswell was attacked last week. The wounds inflicted were three in number, but fortunately did not affect a vital part, although an operation had subsequently to be done to remove the bullets. All the incidents of this case seem to emphasise very clearly the unfortunate position in which in the present state of the law a medical man may be placed in relation to the certifying of insane persons.

Cerebro-spinal Meningitis.

From the reports which come to hand it would appear that the epidemic of cerebro-spinal meningitis which has hitherto prevailed principally in some of the larger towns is tending to spread to the smaller burghs and country districts. Deaths from the disease are reported this week from Alloa, Kirkcaldy, and Forfar. I regret to learn that one of the assistant medical officers of health of the city of Glasgow has contracted the disease, but it is satisfactory to hear that he is progressing as favourably as can be expected.

April 23rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Typhus Fever in Oughterard.

THERE was a mild epidemic of typhus fever recently in the union of Oughterard which the rural district council stated to be due to famine. The Local Government Board reported that it was not due to insufficient food but to the insanitary state of the town. The medical officer has reported that there are now only six cases in the fever hospital, five of whom are about to be discharged. He says that he expects to have the hospital empty within a week and that the difference of opinion between the district council and the Local Government Board will probably end with the disappearance of the fever.

Adelaide Hospital, Dublin.

The annual meeting in connexion with the Adelaide Hospital took place on April 22nd, the Bishop of Ossory presiding. Captain R. Wade Thompson read the annual report of the managing committee, which showed that the entire debt of the hospital had now been paid off. Dr. Wallace Beatty read the medical report and Mr. Francis T. Heuston the surgical report. The chairman proposed the adoption of the reports, which motion was seconded by Dr. J. Little.

Cerebro-spinal Fever in Dublin.

The epidemic of cerebro-spinal fever, which was never severe or widely spread in Dublin, has now practically disappeared. At the last meeting of the managing committee of Cork-street Fever Hospital the medical superintendent reported that cerebro-spinal fever had ceased, only one patient, an infant now convalescent, being in the hospital. On April 19th three cases were reported at Portadown, one of which proved fatal, while another child was said to be in a state of collapse.

Cerebro-spinal Fever in Belfast.

At the weekly meeting of the Belfast public health committee held on April 18th it was reported that the large number of 30 cases of cerebro-spinal meningitis had been

reported during the previous week and during the week ended Saturday, April 13th, 20 deaths had been registered from the same cause. Altogether, since the commencement of the epidemic 313 cases of cerebro-spinal fever have been notified, with 200 deaths. Apart from "spotted fever" the number of cases of infectious diseases is less and the general death-rate for the week is 22·4, which is lower than during the previous week, when it was 25·0. Cerebro-spinal fever has broken out in Portadown.

Lurgan Workhouse.

Mr. Peddie, C.E., after examining and testing the drainage and sanitary arrangements of the Lurgan Fever Hospital, has reported to the guardians that he considers that the fever hospital in its present insanitary condition is unfit for habitation considering the purpose for which it was used. As a result of his examination and tests of the drainage and sanitary arrangements of the workhouse he condemns the whole establishment, and he reports his opinion that an urgent and radical change is absolutely necessary and essential to render the workhouse safe and sanitary. The matter—which is very urgent—is to be considered by a special committee of the whole board.

Holywood Water-supply.

Holywood, a small township on the east side of Belfast Lough, has a very unsatisfactory water-supply, for at a meeting of the urban council held on April 18th it was reported that the water was polluted owing to frogs and fish getting into the main from the clear-water basin.

Milk Control in Belfast.

The public health committee of Belfast has taken notice of the revelations that have been brought out at the Health Commission, for on April 22nd, for the first time in the annals of Belfast, two prosecutions took place for special offences in the milk trade. In one case a cowkeeper was prosecuted for milking a cow with a quantity of cow manure on his hands. He was fined 10s. and costs as it was a first offence, the magistrate saying that he should impress on his servants the importance of washing their hands when milking cows. In the second prosecution, a young man was found delivering milk from a cart in which there were two or three buckets of refuse (that is, stalks of vegetables, potato skins, old bones, &c., used for feeding pigs). It is a common practice in Belfast for this to occur, the prosecuting attorney stating that hundreds of milk-carts employed in the city carried refuse from the houses to which they supplied milk, and this is the very first attempt to correct a practice which the magistrate who heard the case said "must be stopped." The case was adjourned for four weeks to see if there was any repetition of the offence.

April 22nd.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Lord Lister's Eightieth Birthday.

THE eightieth anniversary of Lord Lister's birthday was the occasion of many manifestations of esteem, not only from the German medical profession, but also from the general public. The leading daily newspapers published articles dealing with his life and work and describing him as one of the greatest benefactors of humanity. The medical journals, of course, made appropriate references to the event, but naturally did not enter into particulars regarding the transformation of surgery brought about by him, as this is known to every medical student. The *Münchener Medicinische Wochenschrift* provided a souvenir of the early days of antiseptic surgery by publishing a complete translation of Lord Lister's first article which appeared in THE LANCET of March 16th, 1867, with the heading, "On a New Method of Treating Compound Fracture, Abscess, &c., with Observations on the Conditions of Suppuration." Lord Lister is an honorary member of the German Surgical Association and the committee has sent him an artistically designed address which was previously read and approved at a meeting of the association held on April 4th. In this address it is said that to mark the progress which has been made in surgery since the time of Lord Lister's work it is customary to speak of an ante-Listerian and a post-Listerian era and that the German surgeons are proud of the fact that they were among the first to recognise the importance of his great discovery.

The Russo-German Medical Society.

A Russo-German Medical Society has just been constituted in Berlin under the presidency of Professor von Leyden and Professor Hildebrandt of Berlin and Professor Bechterew of St. Petersburg. It is the aim of this new international medical society to promote cordial scientific and social relations between the Russian and German medical profession. Regular meetings at various places will be held, a library and a dispensary for indigent Russian patients will be established, and there is a prospect of a Russian hospital being founded in Berlin. It is said that some hundreds of the leading medical men of Germany and Russia have become members of the society.

The German Balneological Society.

The annual meeting of the German Balneological Society was held at Berlin from March 7th to 11th. Interesting addresses were read by Professor Hoffa on the modern treatment of diseases of the joints and by Professor Wassermann on the progress made in the diagnosis of infectious diseases. Dr. Determann of St. Blasien read a paper on the viscosity of the blood. He said that the viscosity was increased by the application of cold water, by sweating, and by passive congestion. A vegetarian diet and the application of hot water caused a decrease of the viscosity. The red corpuscles and the leucocytes were influenced in the same way as the viscosity. Dr. Baur of Nauheim discussed the question whether a hypernormal blood pressure was a contra-indication against the application of carbonic acid baths. He said that in 75 per cent. of his patients the blood-pressure decreased by the Nauheim treatment and that in the remaining cases which were complicated with Bright's disease he was convinced that no undesirable symptom developed. Dr. Grödel of Nauheim said in the discussion that in these cases hip baths were preferable. Professor Strauss of Berlin spoke on the subject of pseudo-anæmia. He said that a paleness of the skin was often confounded with real anæmia and was therefore treated on erroneous principles. Pseudo-anæmia or ischæmia of the skin was a symptom of Bright's disease and of chronic lead poisoning and was a form of vascular spasm of nervous origin occurring in patients who suffered from diseases of the gastro-intestinal organs and especially from enteroptosis; sometimes it was a symptom of incipient tuberculosis. The proper treatment of pseudo-anæmia was a nourishing diet and hydrotherapy, avoiding the use of iron. Dr. Siebelt of Flinsberg spoke on the treatment of late symptoms of gonorrhœal origin. Gonorrhœal arthritis and neuritis were favourably influenced by mud baths; in cases of chronic gonorrhœal disease of the female genital organs he had seen good results from the administration of pine-bark baths and prolonged irrigations with this fluid in which the high amount of tannic acid and of resin was an efficient agent. Professor Kisch of Marienbad read a paper on the constitutional form of lipomatosis. This condition was different from alimentary obesity and was, as a rule, a symptom of pathological alteration of the blood. In treating it the usual reducing methods should therefore be avoided and improvement of the nutrition of the tissues should be aimed at. Dr. Selig of Franzensbad spoke on vibratory massage of the heart and stated that orthodiagraphy proved that a decrease of the dilated heart occurred under vibratory massage, while the healthy heart did not show any alteration. Cardiac asthma and cardiac failure were also favourably influenced. Dr. Löbel of Dorna-Watra spoke on the treatment of Bright's disease by mud baths. As these baths reduced the blood pressure and, moreover, had a favourable influence on polyuria and the respiration they might be advantageously employed in Bright's disease. Dr. Steinsberg discussed the treatment of chlorosis by mud baths. Adopting the view that chlorosis was principally caused by an anomaly of the ovarian secretion he recommended hot mud baths because they acted especially on the ovaries and therefore not only relieved the symptoms but tended to correct the lesion on which the disease depended. Dr. Riedel of Berlin spoke on the physical treatment of headache. In hyperæmia of the brain and the meninges he recommended cold applications to the head and to the carotid arteries and Nägeli's hand pressure. For headache

caused by anæmia, however, Nägeli's method failed. Massage was efficacious in the treatment of rheumatic and neurasthenic headache. Dr. Laqueur of Berlin spoke on the subject of radio-active baths. He had made experiments with baths, to which a radio-active salt called radiosal had been added. The emanation of radium had an obvious effect on the human organism as was shown by a reaction in arthritic joints and by the presence of radio-activity in the urine passed after the bath. In some cases of rheumatic and gouty arthritis an improvement was obtained. Dr. Immelmann of Berlin spoke on the treatment of chronic bronchitis and bronchial asthma by the x rays. He said that he had obtained favourable results in ten cases after a few administrations. Every administration in which the thorax had to be exposed from different sides ought to last about ten minutes; in cardiac asthma the method fails. Dr. Munter of Berlin read a paper on the physical treatment of certain complications of diabetes, with special reference to hydrotherapy, thermotherapy, mechanotherapy, and faradisation. He pointed out the indications for the use of these methods, but insisted on the necessity of employing them only as adjuncts to the dietetic treatment which was always the principal consideration in diabetes. Dr. Tobias of Berlin spoke on the physical treatment of nervous diarrhœa. In addition to an appropriate diet, hydrotherapy in the form of hip-baths, shower baths, and wet packing was recommendable, but local treatment should be avoided. Massage, gymnastics, and active sports were also contra-indicated. Among the other papers read before the congress mention may be made of those on the treatment of bronchial asthma by Dr. Goldschmidt of Reichenhall; on the refraction of the blood by Dr. Marcus of Pyrmont; and on the importance of spirochætæ for the diagnosis of syphilis by Dr. Schuster of Aix-la-Chapelle.

April 22nd.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

Italian Mineral Waters.

"A hydrological awakening" (*un risveglio idrologico*) is the appropriate description of Italy's practical recognition of her wonderfully rich but long neglected resources in mineral waters. I say "long neglected," because many of the resorts now in special favour were known to the ancient Romans and were even frequented in mediæval times, but within the last three centuries have seemed to share the general collapse that overtook well-nigh all things Italian till the national resurrection under the House of Savoy and its great Minister Cavour. Not a year passes without an addition to the rapidly multiplying list of "stazioni termali," involving not only the discovery of new mineral springs but the rehabilitation of old ones—their efficacy enhanced by all the modern appliances of scientific balneology and all the comforts of the up-to-date hotel. The British consultant, indeed the English-speaking practitioner all the world over, whose *clientèle* is recognised by economic Italy as one of her most desirable assets, is more and more likely to be asked by patients at the close of an Italian season to what thermal establishment they should resort to confirm or to supplement the "cure" they have been undergoing on the Neapolitan, Tuscan, or Ligurian Riviera or in this or that central winter city. To enable the said consultant or practitioner to answer that question promptly and effectively the Direzione Generale della Sanità has just issued a handsome volume on the "Acque Minerali d' Italia," containing full, correct, and succinctly detailed accounts of all the Italian balneary resorts now recognised by the profession. Well illustrated and rich in topographical indications the volume conveys the desired information in the Italian and French languages, and I have only to add that its editor is the veteran balneologist, Dr. Paolo Casciani, professor of medical hydrology in the Roman University, to convince the reader of its trustworthy and authoritative character. Italy has too long had the mortification of seeing the tide of invalid travel ebb away from her thermal establishments to transalpine rivals in no way superior while much more expensive and historically and artistically less interesting, and it is to vindicate her claims to the retention of that *clientèle* that her Public Health Department puts forth the volume above referred to—a volume, moreover, that would well pay reproduction in an English dress.

Homicide and the Abolition of Capital Punishment.

Every instance in which the British Home Office sees fit to commute the death penalty is hailed by the Italian press as an indication that the "Mother of Parliaments" from whom she has borrowed so much is in turn taking a leaf out of Italy's book and will ere long follow her example in abolishing capital punishments. Such being the case, it may be well to put in evidence the Italian record of homicides and from this to form a judgment how far she is warranted in the abolition of what other and less backward countries still find to be a deterrent to the would-be assassin. In the last statistical year there were in the Italian peninsula and islands 3106 murders and 93,368 *ferimenti* (woundings with intent)—that is, well-nigh 10 homicides per 100,000 of the inhabitants. In the year before the homicides were 3202 and the woundings with intent were 89,589, giving 1903 a precedence over 1902 of 3683 lethal crimes between homicides and woundings with intent. Germany's record in the matter of homicide is 1·88 per 100,000 of the population, England's 0·42, and Scotland's 0·37. Spain, which (according to Rossini) has the merit as regards Italy of saving the latter from the reproach of being last in the list of European civilisation, has 5·31 homicides per 100,000—about half Italy's percentage. THE LANCET has more than once gone into the etiology of Italy's "sinister priority" in *fatti di sangue* and recognised the force of her great criminal statistician, Baron Garofalo's contention that the main (not the sole) cause is the universal carrying of the knife. In fact 75 per cent. of lethal crimes are due to this weapon! Out of every 100 minors (between boyhood and adult age) charged with homicide, actual or attempted, 80 used the knife, which in all cases was, in size and form, of the kind "prohibited" by law. But, like many other things Italian, that law is "more honoured in the breach than in the observance," and in the southern provinces particularly man and boy "would sooner" (according to the Government organ the *Tribuna*) "go without bread than without the knife." Now and then the police make a raid on the public-houses and gambling haunts and impound some 40 or 50 knives as the result. But the culprits in whose possession they have been found and on whom a punishment little more than nominal (usually a fine) is inflicted contrive to replace the "prohibited" weapon next day with a view to operations offensive or defensive (generally the former). Flogging would be an effective means of suppressing the illegal carrying of the knife, but of all punishments that is the one to which Italian criminal reformers have the most rooted objection. And so, I fear, Italy will maintain her "sinister priority in *fatti di sangue*," till education has done its humanising work—not a very promising outlook with "analfabetismo" (ignorance of the alphabet) one of the crying defects of the army and with 75 per cent. of the young married couples in Sicily and Calabria unable to sign the marriage lines!

Salt and Pellagra.

The *Rivista Pellagrologica Italiana* has an important contribution from the pen of Dr. Camurri on the sparing use of salt in diet as a concurrent cause of the prevalence of pellagra in Italy. The alimentation of the peasantry is almost exclusively vegetarian (a fact that, *inter alia*, explains its low resisting power to such diseases as pneumonia), and after pointing out the rôle of chloride of sodium in digestion and assimilation and the prophylactic virtue it possesses in the system, particularly as against maladies originating in defective or perverted nutrition, he makes an appeal to the Government to remove the duty on salt and so to place an essential constituent of diet within the reach of the agrarian poor—the class most subject to pellagra.

April 20th.

THE PROTECTION OF CHILDREN.—We learn that the council of the National League for Physical Education and Improvement and the council of the National Health Society have jointly organised a meeting to be held on Thursday, May 2nd, at 5 P.M., at the Royal United Service Institution, Whitehall (by permission of the council), to advocate the protection of children by supporting the proposed legislation to keep children out of public-houses.

Obituary.

WILLIAM HENRY RANSOM, M.D., F.R.C.P. LOND., F.R.S.

Dr. William Henry Ransom, who for many years occupied a foremost position among the medical men of Nottingham, died on April 16th at his residence in Park Valley in that city. Considering his great age and the fact that he was more or less of an invalid for the last three years the sad event was not altogether unexpected.

Dr. Ransom was born in 1823 at Cromer, in Norfolk, where his father was a shipowner and had also been at sea as a captain. He received his school education at Norwich and when 16 years of age he was apprenticed for four years to a medical man practising in King's Lynn, after which he entered as a student at University College, London. Here he was very successful in his class work, gaining several gold medals both at University College and in the University of London; it is also on record that in 1845 he came out first at a competitive examination in which the late Professor Huxley was his principal opponent. He held the usual residential posts at University College Hospital and afterwards spent a year or two abroad, studying in Germany and Paris. In 1850 he graduated as M.D. in the University of London and settled in Nottingham in the same year. About this time he was busily engaged in investigating the embryology of fish and some points in vegetable pathology, especially the development of galls and tumours in plants and trees. The results of his work on embryology appeared in the publications of the Royal Society in 1854 and 1867, and he was admitted F.R.S. in 1870. In 1869 he was elected F.R.C.P. Lond. In 1854 he received the appointment of physician to the Nottingham General Hospital, a position which he retained for 36 years, only resigning in 1890, and being then elected consulting physician. He still continued to see patients, however, and did not retire from active professional work till about eight or ten years ago. In 1892 the annual meeting of the British Medical Association was held at Nottingham and Dr. Ransom, as president of the section of medicine, delivered an address which was for the most part devoted to questions of vegetable pathology—namely, to plant diseases which, in his opinion, corresponded with inflammatory processes in animal tissues. All such reactions in plants formed galls or witch-knots. The irritants might be of various kinds but those which he chiefly described were of insect origin, the common oak apple and the common nut gall being familiar examples. As late as last year he published a summary of his views in the form of a treatise entitled "The Inflammation Idea in General Pathology."

Dr. Ransom entered heartily into the volunteer movement which commenced about 1859 and served as a private in the 1st Notts Volunteer Rifle Corps (Robin Hoods) soon after its foundation. He took an active part in local politics as a strenuous worker for the Liberal party and in particular was deeply interested in all educational questions. He was an enthusiastic supporter of the Nottingham University College and for a long time was a member of the governing body. He was also a governor of Nottingham High School as a representative of the University of London. About 1870 he designed a form of gas-heated stove for the disinfection of clothing, bedding, and other articles used by patients suffering from infectious diseases. The principle was a good one and the stoves were much used for many years. In 1860 he married Miss Elizabeth Bramwell who died some years ago. They had three sons, one of whom (Dr. William Bramwell Ransom) succeeded his father as physician to the hospital in 1890.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced: Dr. Sukhchinski, formerly professor of pharmacology in the Military Medical Academy, St. Petersburg.—Dr. Ottomar Domrich, body physician to the Duke of Saxe Meiningen and formerly honorary professor of physiology in the University of Jena.—Dr. Moritz Hutzler of the Gisela Children's Hospital, Munich.—Dr. Hermann von Burckhardt, one of the most eminent surgeons in Würtemberg, in his sixtieth year, from carcinoma of the stomach. He was formerly assistant to Professor Thiersch of Leipsic, but had been in charge of the surgical department of the Katherine Hospital in Stuttgart for more than 20 years. His contributions to medical literature on surgical topics were numerous.—Dr. Andrew Willard, formerly professor of hygiene in the University of Vermont.—Dr. Micé, formerly professor of chemistry in the Medical Faculty of the University of Bordeaux.—Dr. John H. Brinton, formerly professor of surgery in Jefferson Medical College, Philadelphia.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held in April the following candidates passed in the subjects indicated:—

Surgery.—H. S. Burnell-Jones (Section I.), Cardiff, Leeds, and London Hospital; M. F. Emrys-Jones (Sections I and II.), Cambridge and Manchester; C. S. Spencer (Sections I. and II.), Manchester; F. A. K. Stuart (Sections I. and II.), St. Mary's Hospital; and E. E. C. Vollet (sections I. and II.), Paris.

Medicine.—H. J. W. Barlee, Middlesex Hospital and Lyons; R. J. Crew (Section I.), Guy's Hospital; G. B. Messenger (Section II.), Westminster Hospital; R. J. W. McKane (Sections I. and II.), Leeds; J. F. McQueen (Section I.), King's College Hospital; S. K. Poole (Section I.), Guy's Hospital; E. Sutcliffe (Sections I. and II.), Leeds; and W. V. P. Teague, London Hospital.

Forensic Medicine.—H. J. W. Barlee, Middlesex Hospital and Lyons; J. F. McQueen, King's College Hospital; E. Sutcliffe, Leeds; and J. S. Ward, Sheffield.

Midwifery.—E. M. Adam, Charing Cross Hospital; H. E. Battle, Leeds; J. Cree, Belfast; M. F. Emrys-Jones Cambridge and Manchester; H. A. Fenton St. Mary's Hospital; H. E. Middlebrooke, London Hospital; R. J. W. McKane, Leeds; B. Robertshaw, Manchester; R. Rowlands, Glasgow; and H Stanger, Leeds.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery: H. A. Fenton, C. S. Spencer, F. A. K. Stuart, and W. V. P. Teague.

UNIVERSITY OF DURHAM.—At examinations for the degree of Bachelor of Medicine held in April the following candidates satisfied the examiners:—

FIRST EXAMINATION.

Elementary Anatomy and Biology, Chemistry and Physics.—*Second-class Honours:* William George Bendle, College of Medicine, Newcastle-upon-Tyne. *Pass List:* Francis Percy Evers and William Joseph Hickey, College of Medicine, Newcastle-upon-Tyne; Carl Johan Valfrid Swahnberg, Charing Cross Hospital; Harold Frieze Stephens, Madras Medical College; and Robert Wilkie Smith, Alfred Tulloch Thompson, and Thomas Ruddock West, College of Medicine, Newcastle-upon-Tyne.

Elementary Anatomy and Biology.—John Bain Alderson, Richard Murray Barrow, Roger Errington, David Farquharson, Sarah Louisa Green, Thomas Albert Hindmarsh, Arthur Sydney Hopgood, Tom Merchant Hopgood, Frank Hutchinson Kennedy, Richard Bridge Lilly, John Lumb, and Benjamin Bell Noble, College of Medicine, Newcastle-upon-Tyne; Thomas Alfred Peel, Royal College of Surgeons, Ireland; and Arthur Hyde Wear, College of Medicine, Newcastle-upon-Tyne.

Chemistry and Physics.—Everard Cecil Abraham, College of Medicine, Newcastle-upon-Tyne; Louis Ernest Seide Gellé, Edinburgh Medical School; Harold Llewellyn James, Guy's Hospital; Hubert Vere Leigh, University College, Cardiff; George Cuthbert Mura M'Gonigle, College of Medicine, Newcastle-upon-Tyne; Oswald Sinclair Norton, Guy's Hospital; and Henri René Guillaume Vander Beken, London Hospital and College of Medicine, Newcastle-upon-Tyne.

Elementary Anatomy—William Smith, B.Sc., College of Medicine, Newcastle-upon-Tyne.

SECOND EXAMINATION.

Anatomy, Physiology, and Materia Medica.—*First-class honours:* Jabez Ethelbert Dainty, College of Medicine, Newcastle-upon-Tyne. *Second-class honours:* Charles Marks, College of Medicine, Newcastle-upon-Tyne. *Pass list:* Hubert Cyril Willoughby Allott, Wilfred Barkes, and John Akilade Caulcrick, College of Medicine, Newcastle-upon-Tyne; Francis Hamley Fawkes, St. Mary's Hospital; Herbert Edward Fullerton, Cyril John Henderson, and Francis Frederick Trevor Hare, College of Medicine, Newcastle-upon-Tyne; Satyen Mozumder, St. Bartholomew's Hospital; William Reynolds, Guy's Hospital; William Sacco, College of Medicine, Newcastle-upon-Tyne; Dorothea Mary Tudor, London School of Medicine for Women; and William Robert Elstob Unthank and Charles Leslie Wigan, College of Medicine, Newcastle-upon-Tyne.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Wilhelm Dieck and Dr. Fritz Williger have been appointed Extraordinary Professors of Odontology.—*Bonn:* Dr. Nussbaum, Extraordinary Professor of Anatomy and Custos of the Anatomical Institute, has been appointed Ordinary Professor and Director of the Institute, in succession to Dr. v. Lavalette St. George, who retires.—*Chicago (North-Western Medical School):* Dr. A. E. Halstead has been appointed Professor of Surgery.—*Erlangen:* Dr. Oskar de la Camp of Marburg has been appointed Professor of

Internal Medicine and of Pharmacology, in succession to Dr. Voit.—*Kieff:* Dr. A. Shcherbakoff of Warsaw has been appointed Professor of Therapeutics.—*Leyden:* Dr. P. L. Kan, *privat-docent* of Otology and Laryngology, has been promoted to an Extraordinary Professorship.—*Munich:* Dr. Otto Walkhoff, *privat-docent* of Odontology, has been promoted to an Extraordinary Professorship.—*Prague (Bohemian University):* Dr. Ruzicka has been recognised as *privat-docent* of General Biology.—*Rio de Janeiro:* Dr. F. Terra has been appointed Extraordinary Professor of Dermatology and Syphilography.—*Rostock:* Dr. Adolf Beck has been recognised as *privat-docent* of Surgery.—*St. Petersburg (Military Medical Academy):* Dr. S. Delitsin, Extraordinary Professor of Operative Medicine, has been promoted to an Ordinary Professorship.—*Vienna:* Dr. Fritz Hitschmann has been recognised as *privat-docent* of Midwifery and Gynæcology.—*Würzburg:* Dr. A. Schmincke, First Assistant in the Pathological Institute, has been appointed Prosector.

KING'S COLLEGE (UNIVERSITY OF LONDON).—The following course of nine lectures on the Visual and Cutaneous Sensations will be given by Dr. C. S. Myers during the summer session on Fridays at 4.30 P.M.:—May 3rd: The Facts of Colour Vision. 10th: Visual Purple; Rod Vision; Cone Vision. 17th and 24th: Theories of Colour Vision. 31st: The Mechanism of Accommodation. June 7th: Cutaneous Sensations. 14th: Spatial Perception by means of the Skin. 21st: Spatial Perception by means of the Eye. 28th: Binocular Interaction; Geometric Visual Illusions. The lectures will be free to all students of King's College and to all students of other medical schools in London, to all internal students of the University of London, and to all medical practitioners on presentation of their cards. The course has already been recognised by the University as a B.Sc. Honours course.

LITERARY INTELLIGENCE.—The Scientific Press announces the issue of a new series of the *Hospital* as a definitely medical journal. We welcome the competition of our contemporary. The first leading article in the new series, which appeared in the issue of Saturday, April 13th, laid down a programme of large scope.—The British Gynæcological Society announce that owing to the amalgamations of the societies forming the new Royal Society of Medicine, the issue of the *British Gynæcological Journal* in its present form will cease after the publication, about August next, of a Supplement to the twenty-second volume recently completed. The Obstetrical Society of London and the British Gynæcological Society will unite to form a single section of obstetrics and gynæcology in the Royal Society of Medicine and the *Obstetrical Transactions* and the *British Gynæcological Journal* will be superseded by the publication of the proceedings of that section in a form which will represent and continue both the former publications. The Supplement will be in the form of a number of the *British Gynæcological Journal*.

THE TEACHING OF HYGIENE AND TEMPERANCE IN SCHOOLS.—A conference on the teaching of hygiene and temperance in the universities and schools of the British Empire was held at the Examination Hall, Victoria Embankment, London, on April 23rd. The proceedings lasted all day and a resolution was passed expressing the satisfaction of the conference that hygiene and temperance were systematically taught in the elementary schools of the colonies of the empire, and urging all local authorities in the United Kingdom to make hygiene and temperance an essential part of the education of all children. Lord Strathcona, who opened the conference, observed that it was better to lead people than to attempt to drive them in regard to hygiene and temperance, and pointed out that absolute prohibition was impracticable. In the afternoon, when Sir John Gorst presided over the meeting, Sir Victor Horsley delivered an address in which he contended that an essential reform in the Board of Education was that such advice should be supplied to the Minister of Education as to enable him to grasp the principles of scientific education. From a medical and scientific standpoint the whole system of education in the hygiene of common life and instruction in temperance required revision. On the motion of Sir Lauder Brunton, seconded by Mr. J. G. Jenkins, the Agent-General for South Australia, a resolution was passed stating the opinion of the conference that it was essential that a medical department should be instituted in the Board of Education. Amongst other speakers in the course of the day were Sir John Cockburn, Sir Philip S. Jones, M.D., Sir Thomas Fuller, Dr. Helvenius Seppälä, and Mr. A. Pearce Gould. Further reference to the conference is made in a leading article this week.

COOMBE DOWN CONVALESCENT HOME.—The Convalescent Home at Coombe Down, near Bath, which has been closed for three months for structural alterations and improvements, was formally opened on April 10th.

MEDICAL MEN AS CORONERS.—At a recent meeting of the Gloucestershire county council Mr. Richard Macartney, L.R.C.P., L.R.C.S. Edin., of Cinderford, was elected coroner for the Forest of Dean district, *vice* Mr. M. F. Carter, solicitor, deceased.

LONGEVITY.—Eleanor Jones, an inmate of the Merthyr Tydvil workhouse, attained her hundredth year recently. She was born at Llandilo.—The *Times* of April 22nd states that Mr. Edmund Crisp celebrated the hundredth anniversary of his birthday on April 21st at Great Yarmouth. Mr. Crisp was a cab proprietor, but retired from business 40 years ago. He enjoys good health and is still able to take a walk daily.

TREATMENT OF TUBERCULOSIS.—As already mentioned in our columns, the Birmingham town council has approved of a proposal to purchase the Satterley Grange estate of 320 acres on the Cotswold Hills, near Cheltenham, for £17,000 for a sanatorium. The health committee intends to begin treatment with not more than 40 patients, erecting 40 chalets at less than £100 each. It is estimated that these and other necessary works will cost £8000, making, with the purchase of the land, a total of £25,000. It is calculated that each patient will cost 30*s.* weekly, the annual cost of maintenance amounting to £4220.

DISTURBANCES IN ST. PETERSBURG MILITARY MEDICAL ACADEMY.—The Chief of the Military Medical Academy has found it necessary to hang up the following notice in the institution, dated April 2nd:—"I am compelled to inform the students of the Academy as follows: If the students continue to disturb order and silence at the lectures and during work in the laboratories, clinics, and other departments of the Academy, then the Academy will be promptly closed." Besides this, says the *Novoe Vremya*, a group of medical men have hung up a list in the refectory of the Academy with an invitation to all students to sign who are desirous of attending the lectures regularly and who will remain outside all political parties. Hitherto there have been but eight signatures appended.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held at Caxton House, Westminster, on April 18th, Dr. F. H. Champneys being in the chair. A letter was read from the Privy Council transmitting an Order in Council extending the period for which the present rules of the Board were in force to April 30th, 1907. A further letter from the Privy Council was read stating that the Lords of the Council proposed to approve the revised rules of the Board except that portion of Section D which had been the subject of discussion. The Central Midwives Board, on the motion of Mr. Parker Young, which was duly seconded, unanimously agreed to a resolution regretting the action of the Privy Council in exempting a large class of institutions from the operation of the Midwives Act. A letter was read from the Association for Promoting the Training and Supply of Midwives asking the Board to accept as a candidate for examination without further training a woman holding the certificate of the Imperial and Royal Midwifery Training School of Vienna. The Board decided not to grant the application. Applications were received from Jessie Osborn and Mary Sceber for the removal of their names from the roll on the ground that they had decided to retire from practice as midwives. The Board decided to grant the applications and directed the secretary to remove their names from the roll of midwives and to cancel their certificates. A report of the inspector of midwives for the city of Manchester on the conduct during the preceding three months of the midwife Cecily Dennett (who was censured by the Board on Nov. 8th, 1906) was

considered. The Board decided, in view of the favourable nature of the report, to take no further action in the charges pending against this midwife.

NORTH WALES UNIVERSITY COLLEGE.—A sum of nearly £78,000 has already been promised for the building fund of the North Wales University College.

NEW REFORM CLUB.—Mr. A. Rolland Rainy, M.P., will deliver an address on the Necessity for a Minister of Public Health on Friday, May 10th, at 8.30 P.M., in the New Reform Club, 10, Adelphi-terrace, W.C. The chair will be taken by Sir William J. Collins, M.P., M.D. Lond., F.R.C.S. Eng.

BUTTER PROSECUTIONS IN BATH.—At the Bath quarter sessions on April 19th Messrs. Wright of Taunton appealed against the decision of the city magistrates on March 21st last fining them £50 and costs for selling butter alleged to contain added water. The Recorder, holding that there was not sufficient evidence before the magistrates to justify a conviction, gave judgment for the appellants with costs.

UNIVERSITY OF OXFORD.—The 136th report of the Radcliffe Infirmary and County Hospital, Oxford, for the year 1906 shows a satisfactory state of affairs in that institution, the 2259 in-patients treated during the year being 40 more than the number for 1905 and the total expenditure £9238, being £15 less than in the preceding year and £100 less than in 1904. Of these patients 686 were medical and 1573 surgical. With the most active measures to obtain money the committee has still to report a deficit of £303 for the year. During 1906 the Regius Professor of Medicine instituted a course of clinical lectures for students and special departments have been established for the treatment of diseases of the ear, throat, and skin, notable advances in the conveniences afforded for the study of medicine at Oxford.

DONATIONS AND BEQUESTS.—Towards the £30,000 required by the Cardiff Infirmary for a new wing Mr. John Cory has promised to give £5000 on condition that the remaining sum of £25,000 is subscribed within the next six months.—Among the bequests of the late Mrs. Anne Julia Lloyd are the following: £10,000 to the Imperial Cancer Research Fund, in memory of her husband; £1050 to the West London Hospital, to endow a bed in memory of her husband; £500 to the Convalescent Home for Poor Children, St. Leonard's-on-Sea; £500 to the Fever Hospital, Islington; £500 to the Royal Association in Aid of the Deaf and Dumb; £400 to the Royal Free Hospital, to endow a cot in memory of her husband; £200 to the London Fever Hospital; £200 to the Royal Hospital for Incurables; £100 to the Chelsea Hospital for Women; £100 to the National Industrial Home for Crippled Boys; £100 to the National Hospital for Diseases of the Heart; £100 to the London Hospital; and £100 to the Zenana Bible and Medical Mission.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Sanitary Officers in Rural Districts.

On the motion of Sir JOHN DICKSON-POYNDER a return has been ordered by the House of Commons of the medical officers of health and inspectors of nuisances in the rural districts of each county in England and Wales. The return will show the area and population of each district, and, as regards each officer, the amount of his remuneration, whether repayment is made in respect of it by the county council, and whether he holds any other appointment or carries on any other occupation.

Patents and Designs (Consolidation) Bill.

Mr. KEARLEY, the Parliamentary secretary to the Board of Trade, has introduced a Bill to consolidate the enactments relating to patents for inventions and the registration of designs and also certain enactments relating to trade-marks.

Nurses and Private Nursing Homes (Registration) Bill.

The text of the Nurses and Private Nursing Homes (Registration) Bill, which Mr. CLAUDE HAY has introduced in conjunction with Sir ARTHUR BIGNOLD, has been issued. The Bill lays down that no person after Jan. 1st, 1909, shall practise as a registered nurse unless he or she is registered under this enactment. In order to obtain registration a person shall have attained the age of 24 years and shall have had three years' previous training in nursing. This training shall include medical and surgical nursing, with the nursing of enteric fever, invalid cookery, and sanitation. Provisions are inserted in the Bill to permit the registration of existing nurses who hold a certificate of at least two years' training from approved institutions and who have been for five years in *bond-fide* practice. It is proposed to set up a central board, which shall include members of the medical profession, to attend to the conditions and details of registration. By the terms of the Bill this central board shall also, upon the written request of any person or persons who own or manage a private nursing home cause such home to be inspected, and shall, upon compliance by such person or persons with the regulations framed by the board with respect to private nursing homes, register the same. Clause 11 lays down that the powers of the central board in respect to the registration of private nursing homes shall be as follows: (1) To frame regulations; (2) to appoint visitors; (3) to fix and collect fees for registration of private nursing homes; (4) to keep, and publish annually, a register of private nursing homes which have been duly inspected under this Act; and (5) to decide upon the removal from the register of any private nursing home where the regulations made from time to time by the central board are not observed or continued in force, and also to decide upon the restoration to the register of any private nursing home so removed. Regulations framed under this section shall be valid only if approved by the Privy Council. Mr. ANNAN BRYCE has given notice that he will oppose the second reading of this Bill.

Railway Casualties.

A return presented by the Board of Trade to Parliament shows that 1169 persons have been killed and 7204 persons have been injured during the year 1906 upon the railways of the United Kingdom. This compares with 1099 persons killed and 6459 persons injured during the year 1905. The return further shows that during 1906 166 passengers were killed from accidents to trains and other causes, and 2579 were injured. As regards the servants of companies or contractors, 438 were killed and 4358 were injured. The tota's are completed with smaller categories such as trespassers, of whom 455 (including suicides) were killed and 105 were injured.

The Advertisements Regulation Bill.

The Advertisements Regulation Bill has been read a second time and referred to a standing committee. It was allowed to pass this stage one night after 11 o'clock by the unanimous consent of the House of Commons.

Mortality in India from Infectious Diseases.

On the motion of Sir WILLIAM COLLINS a return has been granted showing the number of deaths and the death-rates per million living in India for each of the last 30 years from plague, cholera, enteric fever, and small-pox respectively.

Municipal Milk Depôts Bill.

Mr. NIELD has given notice that he will move the rejection of the Municipal Milk Depôts Bill, which has been introduced into the House of Commons by the President of the Local Government Board.

Education (Provision of Meals) Scotland Bill.

The Standing Committee on Law of the House of Commons has now formally dealt with this Bill and it has been reported to the House. The Government, through Mr. SINCLAIR, the Secretary for Scotland, has promised that opportunities will be given during the progress of the Government Bill dealing with the provision of meals for the discussion of certain points of machinery on which a difference of opinion exists between them and the Labour party.

HOUSE OF COMMONS.

WEDNESDAY, APRIL 17TH.

Sanitary Improvements in Provided Schools.

Mr. ASHLEY asked the President of the Board of Education whether he had received applications from any local education authorities to spread over a period of years the cost of structural and sanitary improvements of their provided schools.—Mr. JOHN BURNS gave the following written reply: Perhaps I may be allowed to answer this question. A good many local education authorities have applied to the Local Government Board for sanction to loans to meet the cost of structural and sanitary improvements in provided schools and sanction has frequently been given to such loans.

The Milk for Workhouse Children.

Mr. H. H. MARKS asked the President of the Local Government Board whether, in view of the statement in the second interim report of the Royal Commission appointed to consider the relations of human and animal tuberculosis as to the amount of disease and loss of life, especially among the young, to be attributed to the consumption of cow's milk containing tubercle bacilli, and pending full consideration of the subject, he would consider the advisability of issuing a general order directing that all milk supplied to children in workhouses should be boiled, or sterilised, or pasteurised, or subjected to some process approved by the Board with a view to rendering it free from tuberculous poison.—Mr. BURNS, in a written answer, replied: The

dietary order issued by the Local Government Board in 1900 contemplates that young children in a workhouse shall be dieted in accordance with the directions of the medical officer and with careful regard to the requirements of each individual child. In many Poor-law establishments the milk is treated in the manner suggested by the honourable Member, but looking to the circumstances I have mentioned, and also to the division of medical opinion on the question of the best way of dealing with milk for children, I doubt the expediency of issuing a general order on the subject at the present time.

The Consumption of Tuberculous Milk.

MR. MARKS asked the honourable Member for South Somerset, as representing the President of the Board of Agriculture, whether in view of the opinions as to the danger to human life from the consumption of tuberculous milk expressed in the interim report of the Royal Commission appointed to inquire into the relations of human and animal tuberculosis, he would now reconsider the advisability of issuing a general order to compel the notification of cases of disease of the udder in cows which are kept for the purpose of selling their milk.—SIR EDWARD STRACHEY furnished the following written answer: The report of the Commission is receiving our careful consideration. The matter is, however, one primarily affecting the public health, for which my right honourable friend, the President of the Local Government Board, is responsible, and with whom my noble friend proposes to confer on the subject. We quite recognise its importance.

The Patents and Designs Bill.

The Patents and Designs Bill, which is under the charge of Mr. LLOYD GEORGE, the President of the Board of Trade, was read a second time after a debate lasting several hours.

The Butter and Margarine Bill.

Sir EDWARD STRACHEY, in moving the second reading of the Butter and Margarine Bill, said that it was founded on the recommendations of the Select Committee which sat last year. Some of the evidence given before that committee showed that there had been a great deal of adulteration and "faking" of butter. In a case taken recently against a creamery company it was stated that the profits made by adding lardine to butter were £5650 in 15 months. Accordingly there was a real need for a Bill which stopped the adulteration of butter at its source. By the provisions of the Bill the existing law with regard to registration of manufactories of margarine was extended to butter factories and to premises where butter substitutes were made. Powers of inspection were provided in order to prevent fraudulent trade. It was also laid down that no butter for consignment containing more than 16 per cent. of moisture should be sent out of a butter factory. There were also regulations for the sale of butter mixture and imitation butter, the description and name of which would have to be approved by the Board of Agriculture. No description or name which would lead the public to believe that the imitation was genuine butter would be sanctioned.

The debate on the Bill was adjourned.

THURSDAY, APRIL 18TH.

Unvaccinated Children in Derby.

Mr. BELL asked the President of the Local Government Board whether he was aware that Dr. R. W. Johnstone, one of the Local Government Board inspectors, had instructed the vaccination officer of the Derby union to re-commence prosecutions under the Vaccination Acts; whether he was aware that there were between 25,000 and 30,000 children unvaccinated in Derby, and whether the parents of all those would also be prosecuted; and, if so, would those of the longest standing be proceeded against first and continued on in that order; and whether Dr. Johnstone's action had the sanction of the Local Government Board.—Mr. BURNS replied: A new vaccination officer has recently been appointed at Derby and Dr. Johnstone acted properly in advising him as to his duties, one of which is to take all reasonable steps to put the Vaccination Acts in force. I am aware that there are in Derby a large number of unvaccinated children. It is not contemplated that proceedings will have to be taken in all these cases. I understand that Dr. Johnstone told the vaccination officer that he should use all possible means of persuasion to induce parents to comply with the law, and if this failed he should institute proceedings in a limited number of cases with a view to securing its observance. The selection of the cases would rest with the vaccination officer.

Small-pox Epidemic at Metz.

Mr. LUPTON asked the Secretary of State for Foreign Affairs whether he could give any information about an alleged epidemic of small-pox at Metz which began last July, had assumed alarming proportions, had seriously affected trade and industry, and had caused the usual Eastertide festivities to be abandoned; could he say if the population at Metz was protected by vaccination and revaccination with the same thoroughness as the rest of the German Empire; and, if he had not this information, would he send a Special Commission to inquire and report.—Sir EDWARD GREY answered: I have no information other than that supplied to me by the honourable Member. His Majesty's Ambassador at Berlin would no doubt ask the German authorities to facilitate any inquiry which competent British authorities may desire to make independently in the interests of medical science, but I have not been advised that the occasion is one which requires the appointment of a Special Commission by His Majesty's Government.

The Conscientious Objector.

Dr. RUTHERFORD asked the Secretary of State for the Home Department whether his attention had been called to the fact that a Hanwell applicant applied twice to the magistrates at the Brentford police court, on March 2nd and 16th, for an exemption under the Vaccination Act, 1898, and was refused; and what steps he proposed taking to give the conscientious objector a fair hearing.—Mr. GLADSTONE wrote in reply: I have received two letters calling my attention to the case. The amendment of the law is under consideration by my right honourable friend the President of the Local Government Board.

Cases of Anthrax.

Mr. PARKER, on behalf of Mr. JOWETT, asked the Secretary of State for the Home Department whether, in view of the fact that during the six months ending March 20th last there were 54 cases of anthrax reported to his office, 14 of which were fatal, and that in eight of the 54 cases his officers had failed to ascertain the kind of material upon which the person attacked had been engaged, he could see his way to make such arrangements as would in future enable him to inform himself as to the materials which had carried the infection.—Mr. GLADSTONE answered: I understand that the honourable Member refers to some statistics of anthrax with which I recently furnished him. In the eight cases in which a return was made of "material not ascertained," the reference intended was to the material by which the infection was actually conveyed and not to the material on which the worker was engaged. It is sometimes impossible—especially in the case of miscellaneous occupations such as that of dock labourer, carter, or the like, in which six out of the eight cases occurred—to trace the source of the infection. A mere entry of the material on which the worker had been engaged would not serve any useful purpose and might be actually misleading. Every effort, of course, is made by the medical inspector of factories to trace the source of infection in each case, but it is difficult to see what further arrangements, especially in the case of miscellaneous employments such as those mentioned, can be made to insure a knowledge of the particular material which has carried the infection. I should add that the figures quoted by the honourable Member refer to a period of nearly nine months and not six, as stated in the question.

Mr. PARKER, on behalf of Mr. JOWETT, further asked the Home Secretary whether, in regard to all future cases of anthrax which occurred at seed-crushing, oil-extracting, and bag-making works, he would endeavour to ascertain the kind of material from which the bags used in seed-crushing and oil-extraction operations had been made and, in the case of bag-making works, what materials were being used.—Mr. GLADSTONE said in reply: Yes, Sir, this will be done.

The New Hospital at Tidworth Barracks.

Answering Captain FABER, Mr. HALDANE stated that it was not possible to give a definite date at which the building of the new hospital at Tidworth barracks would commence, but the work in preparation for the new hospital was so far advanced as to render it possible in a short period to arrange a contract.

The Sanitation of Dumbarton.

Mr. ROBERT DUNCAN asked the Secretary for Scotland whether the Local Government Board in effect ordered the conversion of the domestic sanitary system of the burgh of Dumbarton, as stated by the Provost before a Parliamentary Committee on May 8th, 1906; whether he was aware that the conversion referred to had resulted in the domestic sewage of over 20,000 inhabitants being discharged into the tidal pools of the River Leven without purification of any kind; and whether, in view of the condition of the river, he would insist upon such proceedings being taken as would render the conversion of the sewage system harmless to the natural purity of the river.—Mr. SINCLAIR stated, in reply: In 1903 the Local Government Board pressed the local authority to take steps to remove certain nuisances. I understand that the local authority has also in hand the extension of all outlets into the river so as to prevent the deposit of sewage on the shores above low-water mark. When these have been completed it is believed that a great improvement will be effected in the condition of the river bed.

Sanitary Accommodation for the Royal Irish Constabulary.

Mr. SLOAN asked the Chief Secretary to the Lord Lieutenant of Ireland to what extent separate sanitary accommodation was provided for the wives and children of members of the Royal Irish Constabulary living in barracks; whether there was any exception to the rule that one convenience only was provided for men, women, and children, as well as prisoners of both sexes; what means had the constabulary authorities of ascertaining that the sanitary accommodation of Royal Irish Constabulary barracks was wholesome; and whether the surgeon to the force exercised any supervision in this respect.—Mr. BIRRELL replied (in a written answer): Separate sanitary accommodation for women and children is almost invariably provided at the larger stations, but it is not possible to provide such accommodation at many of the small rural stations where the premises are small. The latter stations are usually occupied by one married constable only and in such cases the necessity for separate sanitary accommodation is not so marked. Constabulary stations are periodically inspected by county and district inspectors, as well as by officers from headquarters, so that ample opportunity is afforded for bringing to notice any defects in the sanitary arrangements. The local medical attendants advise on all matters affecting the health of the men and their families and the sanitary condition of the barracks. The surgeon of the force, who is attached to the depôt, exercises no supervision in this respect.

The Training of Midwives.

Mr. ASHTON asked the President of the Local Government Board whether he was aware that there were only 19 counties in England and Wales in which there were institutions approved by the Central Midwives Board for the training of midwives; and that there were only 52 approved institutions in England and Wales, of which 35 were voluntary and only 17 poor-law institutions, of which again six were in London and only 11 in the rest of the country; whether he would say if the Paddington, Farnham, and Epsom infirmaries were yet approved; whether in the voluntary institutions the probationers had to pay fees, and whether in the poor-law institutions they paid none; and if he could state in what way the fees payable in the voluntary institutions were generally disposed of.—Mr. BURNS gave the following written answer: I understand that the figures in the question are substantially correct, the precise figures being as follows:—Counties in England and Wales in which there are institutions approved by the Central Midwives Board for the training of midwives, 19; approved institutions in England and Wales (of which there are 35 voluntary—i.e., non-Poor-law—and 16 Poor-law, of the latter there are six in London and ten in the provinces), 51. The Paddington, Farnham, and Epsom infirmaries have not been approved. I have no information as to the payment and application of fees in voluntary institutions. In Poor-law institutions there are usually no fees.

FRIDAY, APRIL 19TH.

An Outbreak of Typhus Fever in Ireland.

Mr. O'MALLEY asked the Chief Secretary to the Lord Lieutenant of Ireland whether his attention had been called to the resolution of the Oughterard rural district council, passed on April 11th, in which it was stated that the outbreak of typhus fever in the district was due to famine conditions rather than to the insanitary condition of the houses where the outbreak originated, as reported by the Local Government Board medical inspector; and whether he would institute adequate relief works to cope with the distress that prevailed in the Oughterard union.—Mr. BIRRELL replied (by written answer): According to the resolution referred to the district council appears to consider that the fever is not due to the insanitary conditions described by the Local Government Board's inspector, inasmuch as the same conditions have always prevailed at Oughterard. The Board, however, is satisfied that the contention of the council has no support. The state of things found by the inspector constitutes a perpetual menace to public health and if district councils were to be absolved from all responsibility in cases in which insanitary conditions have existed for a long time there would be an end of sanitary reform in Ireland. The Local Government Board is entirely satisfied that there is no foundation for the suggestion that famine prevails in this union and has caused the outbreak of fever. The guardians are bound by law to keep their relieving officers in funds for the relief of all urgent cases. They are well aware of their statutory obligations and powers and the Board cannot consider that they would be so oblivious of their duty to the destitute poor as to allow them to suffer from want of food to an extent which would cause famine fever. The Local Government Board has afforded through the spring months, and is still affording, employment to many hundreds of families in the poorest parts of this union where distress was apprehended and the rates have thereby been relieved of a considerable burden. The Board is satisfied that the resources of the union will be ample to enable the guardians to provide any further relief that may be necessary.

MONDAY, APRIL 22ND.

Dangerous Lunatics in Scotland.

Major ANSTRUTHER-GRAY asked the Lord Advocate whether a dangerous patient in a district asylum might be discharged and handed over to relatives relieved, but not cured; and, in that case, whether the lunacy authorities had no further charge or responsibility.—Mr. SHAW replied: A patient who, when admitted, was dangerous may, on the sheriff being satisfied and on medical certificates, be discharged when this can be done without risk or injury to the public or the patient. As to the latter part of the question, it does not appear to me that there is any such charge or responsibility if the procedure is correctly followed.

Criminal Lunatics in Scotland.

Major ANSTRUTHER-GRAY asked the Lord Advocate whether he would consider the advisability of taking the necessary steps to insure that all cases of dangerous lunatics who had committed assault resulting in loss of life should be dealt with in a criminal lunatic asylum instead of relegating them to a district asylum. The honourable and gallant Member further asked the Lord Advocate whether, seeing that the presence of criminal lunatics who had committed murder was detrimental to the general freedom from severe discipline in district asylums, the beneficial effect of what was termed the open-door system being acknowledged, he would take the necessary steps to keep the district asylums free from criminal lunatics who had committed murder or attempted murder as far as possible.—Mr. SHAW answered: The sending of these cases to a district asylum is no doubt warranted if the procedure under the 15th Section of the Lunacy Act of 1862 is adopted. I may say, however, that the other course, which is also correct in law, appears to me to be more advisable in practice—viz., that when crime has been committed by a lunatic the criminal authorities should deal with it in accordance with their regular powers under Sections 87 and 88 of the Lunacy (Scotland) Act, 1857. There may, no doubt, be exceptional cases, but my desire is that the practice which I think to be preferable should be adopted.

Plague in India.

In answer to Dr. RUTHERFORD, Mr. MORLEY stated (in a written answer) that the recorded deaths from plague in India, including native states, from September, 1896, to end of March, 1907, were approximately 5,012,000. The monthly returns which he received from India showed 58,438 deaths in January, 98,397 deaths in February, and 171,522 deaths in March of the present year. The provinces most affected were the United Provinces, the Punjab, Bengal, and Bombay. He promised to ask the Government of India for a return bearing upon the number of medical men on special plague duty in that country.

The Sanitary Service in India.

Dr. RUTHERFORD asked the Secretary of State for India whether the recommendations to the Indian Government by Professor Simpson, late medical officer of health of Calcutta, to introduce a special sanitary service composed of Indian medical men and women supervised by European experts, and repeated in his work on plague, had been carried out to stay and prevent the ravages of plague.—Mr. MORLEY replied (in a written answer): I would refer my honourable friend to the published resolution of the Government of India, dated Sept. 8th, 1904, creating the office of sanitary commissioner, in which is described the action taken by them on various schemes for the constitution of a separate sanitary service and the difficulties, financial and administrative, in the way of an effective and speedy reorganisation. Much has been done to strengthen and improve the existing sanitary agency at the disposal of local governments, especially in districts where plague is liable to occur. The subject is still engaging the anxious consideration of the Government.

TUESDAY, APRIL 23RD.

Medical Examinations for Lead Poisoning.

Mr. WEDGWOOD asked the Secretary of State for the Home Department whether his attention had been called to a paper read before the English Ceramic Society by Dr. Shufflebotham, an acknowledged authority in lead poisoning, in which he urged that certifying surgeons should be provided with a private room in each factory for the periodical examination of work-people, to avoid the present superficial examination in semi-public offices, and whether the Home Office would inquire into the conditions under which these examinations were carried on with a view to possible improvements.—Mr. GLADSTONE replied: I have not myself seen the paper referred to, but in the covering letter issued with the earthenware special rules of 1901 manufacturers were informed that arrangements should be made to allow due privacy for the medical examination required under the rule.

Notification of Births.

Lord ROBERT CECIL, under the ten-minutes rule, asked leave to introduce a Bill to provide for the early notification of births. He said that infantile mortality existed to a great extent in this country, and every year there occurred 120,000 deaths of infants under the age of one year, and of these probably it was not extravagant to say that 60,000 might be saved if proper precautions were taken. This state of affairs entitled the Bill to the earnest consideration of the House. It meant that out of every 1000 children born, 145 died before they reached the age of one year. The number of deaths in particular localities went as high as 250 or 300 or even 400 out of every 1000. He had said that half of these might be saved. That was not a matter of speculation because in some colonies the death-rate was not higher than 70, and even in some of our own counties it was not higher than 84. The seriousness of this state of things was not lessened by the fact that, although the death-rate in other cases had been diminished by the sanitary measures taken in this country, the infant death-rate had not declined to any extent. It remained practically stationary. The main cause of this state of affairs might be summed up in two sentences. It was due mainly (1) to the neglect of the mother of her own health before the birth of the child, and (2) to the neglect of the health of the child immediately after it was born. More than any one cause ignorance was at the bottom of the deaths of these unhappy children. Something might eventually be done by the improvement of elementary education, but he did not think it was necessary to wait for such a process. He thought something might be done by skilled advice, skilled assistance given to the mother during her early days of motherhood. He was glad to know that there existed a number of societies which have charged themselves with the duty of giving this advice and assistance. In Huddersfield some very remarkable results were obtained through the great influence of Alderman Broadbent. One difficulty was often met by those who were working in this field. It was too often the case that no notification of the existence of a child was given before it was dead. Under the present registration law six weeks were allowed for registration to take place. One-third of the children who died in the first year died within six weeks of their birth. It was therefore quite futile to have a system of registration which did not come into operation until six weeks had elapsed. It was solely with the object of remedying that defect that he had been asked to introduce the present Bill. It was modelled upon the provision which already existed at Huddersfield. It provided that there should be within 48 hours of the birth of every child a notification of its birth sent to the medical officer of health. That notification could be given in the simplest way without any formalities. It might be given by a post-card. The duty was thrown upon the father of the child of making the notification and, failing him, upon anyone who has been on attendance on the mother. Another provision provided that notification should be made in the cases of stillborn children. He would not trouble the House with reasons for that at the present time. It was a matter of very great importance. That was the whole Bill and he asked the House to consider very carefully the seriousness of the evil. He knew that there were some cheerful optimists who flattered themselves that a check on population was not an undesirable thing. He was utterly unable to agree with that view. Apart from what seemed to him its essential brutality it was now agreed to be utterly unsound in political economy. There were others who thought that this loss of infant life operated as a sieve, by means of which only the fittest survived. He believed that to be equally untrue. Not only was it untrue but it was emphatically true that many of those who survived this ordeal went into life maimed and weakened and unfit to bear its struggles. This was absolutely a non-party matter. He ventured to hope that it would also be a non-contentious measure. This proposal of his had received very general support, not only from experts in sanitary matters, but also from the Association of Municipal Corporations. It came to the House with a great body of authority behind it, it was supported by Members in all parts of the House, and he hoped they should have the sympathetic support of the Government, and that the measure might be passed into law before the close of the present Session.

Sir HENRY CAMPBELL-BANNERMAN—Hear, hear.

Leave having been given the Bill was introduced and read a first time.

WEDNESDAY, APRIL 24TH.

Street Accidents in London.

Mr. COOPER asked the Secretary of State for the Home Department, whether the Departmental Committee appointed last year to consider and report upon the question of the provision of ambulances for street accidents in London had finished its inquiry; and when its report would be published.—Mr. GLADSTONE answered: I am not in a position at present to say when the inquiry will be completed and the report issued.

BOOKS, ETC., RECEIVED.

APPLETON, SIDNEY, 25, Bedford-street, Covent Garden, London, W.C.

Diseases of the Lungs. Designed to be a Practical Presentation of the Subject for the Use of Students and Practitioners of Medicine. By Robert H. Babcock, A.M., M.D., Author of "Diseases of the Heart and Arterial System." D. Appleton and Co.; until recently Professor of Clinical Medicine and Diseases

of the Chest, College of Physicians and Surgeons (Medical Department of the Illinois State University), Chicago; Consulting Physician to Cook County Hospital; Consulting Physician to Mary Thompson Hospital, Hospital of St. Anthony de Padua, and of Marion-Sims Sanitarium. First edition. Price 25s. net.

ARNOLD, EDWARD, 41 and 43, Maddox-street, Bond-street, London, W.

A Handbook of Skin Diseases and their Treatment. By Arthur Whitfield, M.D. Lond., F.R.C.P., Professor of Dermatology at King's College; Physician to the Skin Departments, King's College and the Great Northern Central Hospitals. Price 8s. 6d. net.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent Garden, London, W.C.

Ulceration of the Cornea. By Angus Macnab, B.A., B.Sc., M.B., Ch.B., F.R.C.S., Chief Clinical Assistant, Royal London Ophthalmic Hospital. Price 5s. net.

The Diagnosis and Modern Treatment of Pulmonary Consumption. With Special Reference to the Early Recognition and the Permanent Arrest of the Disease. By Arthur Latham, M.A., M.D. Oxon., M.A. Cantab., F.R.C.P. Lond., Author of the Prize Essay on the Erection of the King Edward VII. Sanatorium, Physician and Lecturer on Medicine at St. George's Hospital, Senior Assistant Physician at the Brompton Hospital for Consumption and Diseases of the Chest. Third edition. Price 5s. net.

BEMROSE AND SONS, LIMITED, 4, Snow-hill, London, E.C.; and Derby.

A Handbook to the Workmen's Compensation Act, 1906. By George Frederick Bimery, LL.M., of the Inner Temple and South-East Circuit, Esquire, Barrister-at-Law, Official to the Archdeaconry of Ely, Formerly Abbott Scholar and First Winchester Prizeman in the University of Cambridge, and Scholar of Trinity College. Price 1s. net.

BOOTHROYD, ELIOT, Leighton House, Fleet-street, London, E.C.

Low's Handbook to the Charities of London. 1907. (Seventy-second Year of Publication). Price 1s.

BRAUMÜLLER, Wien und Leipzig.

Die Zentenarfeier des Operateur-Institutes der Wiener Med. Fakultät. Mit den Bildnissen von Vinzenz v. Kern und Lord Josef Lister und der Reproduktion eines Operateur-Diploms aus dem Jahre 1819. Price K. 2, or M. 1.80.

CASSELL AND COMPANY, LIMITED, London, Paris, New York, and Melbourne.

Diseases of Women: A Clinical Guide to their Diagnosis and Treatment. By George Ernest Herman, M.B. Lond., F.R.C.P., Consulting Obstetric Physician to the London Hospital, Consulting Physician-Accoucheur to the Tower Hamlets Dispensary, late President of the Obstetrical Society of London and of the Hunterian Society. Price 25s.

Worry: The Disease of the Age. By C. W. Saleeby, M.D., F.R.S. Edin., Author of "Evolution the Master Key," &c. Price not stated.

CHURCHILL, J. AND A., 7, Great Marlborough-street, London, W.

Cancer of the Rectum: its Surgical Treatment. With an Appendix of 380 Cases. Jacksonian Prize Essay. Fifth Edition. By Harrison Cripps, F.R.C.S., Senior Surgeon to St. Bartholomew's Hospital, Member of the Council, Royal College of Surgeons; Vice-president of the Royal Medical and Chirurgical Society. Price 5s. net.

On Diseases of the Rectum and Anus, including the Fifth Edition of the Jacksonian Prize Essay on Cancer. By Harrison Cripps, F.R.C.S., Senior Surgeon, St. Bartholomew's Hospital. Third edition. Price 10s. 6d. net.

A Course of Lectures on Medicine to Nurses. By Herbert E. Cuff, M.D., F.R.C.S., late Medical Superintendent, North-Eastern Fever Hospital, Tottenham, London. Fifth edition. Price 3s. 6d. net.

Nursing, General, Medical, and Surgical. With Appendix on Sick-room Cookery and Dictionary of Medical Terms. By Wilfred J. Hadley, M.D., F.R.C.P., F.R.C.S., &c., &c., Physician, Pathologist, and Lecturer on Medicine to the London Hospital. Price 3s. 6d. net.

DENT, J. M., AND CO., 29 and 30, Bedford-street, London, W.C.

Sick Nursing. By H. Drinkwater, M.D., Author of "First Aid to the Injured," "Food in Health and Disease," &c. (The Temple Primers.) Price 1s. net.

DORNAN, WILLIAM J., Philadelphia.

Transactions of the American Gynecological Society. Volume 31. For the Year 1906. Price not stated.

ENKE, FERDINAND, Stuttgart.

Die Behandlung der Tuberkulosen Wirbelsäulenentzündung. Von Dr. F. Calot, Chirurg am Hospital Rothschild, am Hospital Cazin-Perrochaud, am Hospital de l'Oise et des Départements, des orthopädischen Instituts in Berck u.s.w. Übersetzt von Dr. P. Ewald, I. Assistent an der chirurgisch-orthopädischen Klinik von Prof. Dr. Vulpius in Heidelberg. Mit einem Vorwort von Prof. Dr. Oscar Vulpius. Price not stated.

Die Behandlung der angeborenen Hüftgelenkverrenkung. Von Dr. F. Calot. Übersetzt von Dr. P. Ewald. Mit einen Vorwort von Prof. Dr. Oscar Vulpius. Price not stated.

EVERETT AND CO., 42, Essex-street, Strand, London, W.C.

Charts of the Diseases of the Horse. With Explanatory Notes and Prescriptions. By Charles Gresswell, M.R.C.V.S., Member of the American Veterinary Medical Association, Consulting Veterinary Surgeon to the National Live Stock Association of America. Revised by George Gresswell, M.A., L.R.C.P. & S.E., L.F.P.S.G. Price 7s. 6d. net.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin, N.W.

Die Zuckerkrankheit und ihre Behandlung. Von Professor Dr. Carl von Noorden, Vorstand der I. medizinischen Universitätsklinik in Wien. Vierte vermehrte und veränderte Auflage. Price M.9.

KARGER, S., Karlstrasse, 15, Berlin.

Jahrbuch für Kinderheilkunde und Physische Erziehung. Unter Redaktion von O. Heubner, A. Steffen, Th. Escherich. 65, der dritten Folge 15. Band. Heft 4. Ausgegeben am 1. April, 1907. Price not stated.

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., LIMITED, Dryden House, Gerrard-street, London, W.

The Religion of Consciousness: A Suggestion for To-day. By F. Reginald Statham, Author of "From Old to New," "The Social Growths of the Nineteenth Century," "Free-thought and True-thought," &c. Price 2s. 6d. net.

J. B. LIPPINCOTT COMPANY, Philadelphia and London.

International Clinics. Edited by W. T. Longcope, M.D., Philadelphia, U.S.A., with Collaboration. Volume I. Seventeenth Series, 1907. Price 35s. net.

LONGMANS, GREEN, AND CO., 39, Paternoster-row, London, E.C.

The Essentials of Chemical Physiology. For the Use of Students. By W. D. Halliburton, M.D., LL.D., F.R.S., Fellow of the Royal College of Physicians, Professor of Physiology in King's College, London. Sixth edition. Price 4s. 6d. net.

Theories of Chemistry, being Lectures delivered at the University of California, in Berkeley, by Svante Arrhenius, Director of the Nobel Institute, Stockholm. Edited by T. Slater Price, D.Sc., Ph.D., F.I.C. Price 5s. 6d. net.

MACMILLAN AND CO., LIMITED, London.

Inflammation. An Introduction to the Study of Pathology. Being the Reprint (revised and enlarged) of an Article in Professor Allbutt's "System of Medicine." By J. George Adami, M.A., M.D., F.R.S., Sometime Fellow of Jesus College, Cambridge, Professor of Pathology, M'Gill University, Montreal. Price 5s. net.

PHILIP, GEORGE, AND SON, LIMITED, 32, Fleet-street, London.

Builders of the Body, or, Lessons on Food Values. By Eustace Miles, M.A., Member of the Executive Committee of the National League for Physical Education and Improvement, 1905-1906; and Miss Mariella John, Principal of the Eustace Miles Cookery School. Price 1s. 6d.

Comparative Chart of Food Values. Graphically illustrated in Colours. (Size, 35 by 45 inches. Mounted on cloth, rollers, and varnished.) By Eustace Miles, M.A., and Mariella John. Price, with small handbook, 3s. 6d. net.

POINAT, A., 12, Rue Jacob, Paris.

Les Formes Postérieures de l'Appendicite. Par MM. P. Vignard, Chirurgien des Hôpitaux; P. Cavaillon, Prosecteur à la Faculté, et Chabanon, Interne des Hôpitaux, de Lyon. Price Fr.1.

REBMAN, LIMITED, 129, Shaftesbury-avenue, London, W.C.

Biographic Clinics. Volumes IV. and V. Essays concerning the Influence of Visual Function, Pathologic and Physiologic, upon the Health of Patients. By George M. Gould, M.D., Editor of American Medicine, Author of "An Illustrated Dictionary of Medicine," &c. Price not stated.

SPRINGER, JULIUS, Monbijouplatz, 3, Berlin, N.

Die Nerven des Herzens, Ihre Anatomie und Physiologie. Von E. von Cyon. Übersetzt von H. L. Heusner. Neue vom Verfasser umgearbeitete und vervollständigte Ausgabe mit einer Vorrede für Kliniker und Aerzte. Price M. 9.

THE JOHNS HOPKINS PRESS, Baltimore.

The Johns Hopkins Hospital Reports. Volumes XIII. and XIV. 1906. Price not stated.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week such information for gratuitous publication.*

BIRKS, G. T., M.B., B.C. Cantab., has been appointed Honorary Assistant Physician to the Bedford County Hospital.

BRISCOE, JAMES R., M.R.C.S., L.R.C.P. Lond., has been appointed Junior House Surgeon at the Great Northern Central Hospital.

BROWN, A. CARNARVON, M.R.C.S., L.R.C.P. Lond., has been appointed Senior House Surgeon at the Great Northern Central Hospital.

DAVIES, D. S., M.D. (State Med.) Lond., L.R.C.P. Lond., M.R.C.S., has been appointed Examiner in State Medicine for the University of London.

DOBLE, F. CARMINOW, M.R.C.S., L.R.C.P. Lond., has been appointed Junior House Surgeon at the Great Northern Central Hospital.

FAULDER T. JEFFERSON, M.A., M.B., B.C. Cantab., F.R.C.S. Eng., has been appointed Honorary Assistant Surgeon to the Throat Hospital, Golden-square, W.

GUNN, R. M., M.B., B.S. Aberd., has been appointed Senior House Physician at the Great Northern Central Hospital.

HUTCHINSON, F. A. STEWART, M.D., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Assistant Surgeon to the Sussex Eye Hospital, Brighton.

LAVINGTON, CYRIL C., M.B., B.S. Durh., has been appointed Out-patient Physician to the Bristol Royal Hospital for Sick Children and Women.

MACPHAIL, DUGALD H., M.B., Ch.B. Glasg., has been appointed Extra Dispensary Physician to the Glasgow Royal Infirmary.

MATHESON, R. MURDOCH, M.D. Edin., F.R.C.S., has been appointed Clinical Assistant to the Royal Victoria Hospital for Consumption, Edinburgh.

MILBURN, OSCAR, M.R.C.S., L.R.C.P. Lond., has been appointed Junior House Physician at the Great Northern Central Hospital.

MORGAN, J. A., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Llanwrtyd Wells District of the county of Brecknock.

PARSONS, GEORGE GOODEN, L.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed Medical Officer for the Workhouse of the Westbury and Whorwelldown (Wiltshire) Union.

SHORLAND, ERNEST TREVOR, L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer for the Westbury and Whorwelldown (Wiltshire) Union.

STEVENSON, HOWARD, M.B., B.Ch. R.U.I., F.R.C.S. Irel., has been appointed Assistant to the Professor of Surgery, Queen's College, Belfast.

WALTERS, H. B., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Chudleigh District of the county of Devon.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ALNWICK INFIRMARY.—House Surgeon, unmarried. Salary £120 per annum, with apartments, attendance, coals, and gas.

AYRSHIRE, CUNINGHAME COMBINATION POORHOUSE.—Medical Superintendent. Salary £300 per annum, with house, fuel, light, &c.

BOLTON UNION WORKHOUSE, Fishpool, Farnworth.—Temporary Assistant Medical Officer.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £100.

BRADFORD ROYAL INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with board and residence. Also House Physician, unmarried. Salary £100 per annum, with board and residence.

BRIDGWATER HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and laundry.

BURY INFIRMARY.—Junior House Surgeon. Salary £80, increasing to £90, with board, residence, and attendance.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

CHELTENHAM GENERAL HOSPITAL.—Surgeon-in-Charge of the Branch Dispensary, unmarried. Salary £90 per annum, with board and lodging. Also House Physician, unmarried. Salary £70 per annum, with board and lodging.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Physician to Out-patients.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House Surgeon for six months, renewable. Salary £60 per annum, with rooms, board, washing, and attendance.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Surgeon for six months. Honorarium of £25, with board, residence, and laundry.

GLOUCESTER, GENERAL INFIRMARY AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Assistant Surgeon on the Acting Medical Staff. Also Assistant House Surgeon, for six months. Salary at rate of £30 per annum, with board, residence, and washing.

HARTSHILL, STOKE-ON-TRENT, NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL.—House Physician. Salary £100 per annum, with apartments, board, and washing.

HULL ROYAL INFIRMARY.—Honorary Surgeon. Also Casualty House Surgeon. Salary £50, with board and lodging.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Assistant House Surgeon. Salary £75 per annum, with residence, board, and washing.

IPSWICH, EAST SUFFOLK AND IPSWICH HOSPITAL.—Third House Surgeon. Salary £50.

ITALIAN HOSPITAL, Queen-square, London, W.C.—House Surgeon for six months. Salary at rate of £60 per annum, with board and residence.

JOHANNESBURG HOSPITAL.—House Physicians and House Surgeon, unmarried. Salaries at rate of £300 per annum, with board and lodging.

KENSINGTON GENERAL HOSPITAL, Earl's Court, London, S.W.—Junior Resident Medical Officer. Salary £40 per annum, with board, washing, and residence.

KENSINGTON WORKHOUSE AND INFIRMARY.—Second Assistant Resident Medical Officer. Salary £100 per annum, with apartments, board, and washing.

KINGSWOOD, BRISTOL, COSSHAM MEMORIAL HOSPITAL.—House Surgeon and Resident Medical Officer. Salary £100 per annum, with board, apartments, and laundry.

LEWES DISPENSARY AND INFIRMARY AND VICTORIA HOSPITAL.—Resident Medical Officer. Salary £120 per annum, with apartments, board, &c.

LIVERPOOL STANLEY HOSPITAL.—House Surgeon. Salary £80 per annum, with board, residence, and washing.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £60 per annum, with board, and residence.

MAIDSTONE, WEST KENT GENERAL HOSPITAL.—Assistant House Surgeon and Anæsthetist, unmarried. Salary £80, with board, lodging, and washing.

MARGARET DISPENSARY, Herne Hill Station, S.E.—House Surgeon. Salary £50–£40.

NEW HOSPITAL FOR WOMEN, Euston-road, N.W.—Pathologist (female).

NORTHAMPTON, BERRY WOOD ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150, increasing to £200, with board, lodging, washing, and attendance.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Surgeon to the Eye Department.

ROCHDALE INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and laundry.

ROYAL EAR HOSPITAL, Dean-street, Soho, W.—House Surgeon for six months. Salary at rate of £40 per annum.

ROYAL EYE HOSPITAL, Southwark, S.E.—House Surgeon. Salary £52 10s. per annum, with board and residence.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Casualty House Surgeon for six months. Board, &c., provided.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand, W.C.—House Surgeon. Honorarium £25 for six months.

ST. GILES, CAMBERWELL, INFIRMARY, Brunswick-square, Camberwell.—Assistant Medical Officer. Salary £120 per annum, increasing to £130 per annum, with apartments, board, and washing.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, City-road, E.C.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Assistant Resident Medical Officer, unmarried, for six months. Salary at rate of £80 per annum, all found.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone-road, N.W.—Clinical Assistants. Fee £3 3s. per quarter.

SHEFFIELD ROYAL INFIRMARY.—Junior Assistant House Surgeon. Salary £65 per annum, with board and residence.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon for six months. Salary at rate of £60 per annum, with rooms, board, and washing.

SUNDERLAND, MONKWEARMOUTH AND SOUTHWICK HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

TEIGNMOUTH HOSPITAL, South Devon.—House Surgeon. Salary £70 a year, with board, lodging, and washing.

THROAT HOSPITAL, Golden-square, W.—House Surgeon. Salary £50 per annum, with board, residence, and laundry.

WADSLEY, NEAR SHEFFIELD, WEST RIDING ASYLUM.—Fifth Assistant Medical Officer. Salary £140, rising to £160, with board, &c.

WALSALL AND DISTRICT HOSPITAL.—Junior House Surgeon. Salary £50 per annum, with board, residence, and washing.

WANDSWORTH UNION INFIRMARY, St. John's Hill, near Clapham Junction.—Junior Assistant Medical Officer, unmarried. Salary at rate of £100 per annum, with board, lodging, and washing.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon, unmarried. Salary £50 per annum, with board, residence, and washing. Also House Surgeon, unmarried. Salary £100 per annum, with board, residence, and washing.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, 73, Welbeck-street, London, W.—Honorary Assistant Physician.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Assistant Ophthalmic Surgeon. Also Officer-in-Charge of X-Ray Department.

WESTON-SUPER-MARE HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board and residence.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Parsonstown, in King's County; at Beith, in the county of Ayr; and at Middleton, in the county of Lancaster.

Births, Marriages, and Deaths.

BIRTHS.

ANDERSON.—On April 18th, at Sanfield, Braunton, North Devon, the wife of Frederick T. Anderson, M.D., of a son.

BROWN.—On April 15th, at Park-road, West Kirby, Cheshire, the wife of W. McIntyre Brown, M.B., Ch.B., of a daughter.

JEFFREYE.—On April 20th, at Clapton-square, N.E., the wife of Frank Jeffreye, M.D., of a daughter.

MARRIAGES.

REYNOLDS—BLACKWELL.—On April 24th, at Avington Church, Berkshire, by the Rev. W. H. Blackwell, father of the bride, and the Rev. F. S. Sclater of Newick Park, Sussex, Cecil Edward Reynolds, M.R.C.S. Eng., L.R.C.P. Lond., youngest son of the late Edward Reynolds of Paxton Hall, St. Neots, Huntingdonshire, Esquire, J.P., to Gwendolen Maud, youngest daughter of the Rev. W. H. Blackwell, Rector of Avington.

STRATFORD—GOULD.—On April 17th, at St. Peter's Church, Belsize Park, Howard M. B. Stratford, M.R.C.S., L.R.C.P. Lond., to Sybil Katherine Lucy, elder daughter of Mr. and Mrs. Gould, of Belsize Park-gardens, N.W.

DEATH.

LOWRY.—On April 18th, at Pakhoi, China, in his 50th year, John Henry Lowry, M.B., Imperial Maritime Customs.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

A PATIENT'S RASH DECISION.

A CORRESPONDENT has drawn our attention to a paragraph in the *Sportsman* of April 19th alluding to the condition of the jockey Arthur Birch, who fractured his spine whilst riding last year at Lingfield. It appears that the unfortunate jockey, who was having the best surgical advice, decided to put himself under an unqualified person for treatment, with the natural result that his medical attendants withdrew from the case. Whether *post hoc* or *propter hoc* we know not, but according to the *Sportsman*, the paralysis is not only as bad as ever but is complicated by the presence of formidable bed-sores; we further learn that Birch "thinks he may have been rash in the decision he took and were the time to come again he might act otherwise than he did." This seems very probable. Our chief object in calling attention to the case is to applaud this very proper comment with which the *Sportsman* concludes its paragraph: "The medical profession, of course, as such, is much too high-minded to harbour spite or even displeasure. Its business is to cure where and when it can, without respect of persons. Should Birch ask anew for the profession's help it would certainly, we take it, be given him when he had complied with the unalterable and, indeed, not unreasonable, requirements of medical etiquette." If non-medical journals more frequently supported so right-minded a view of professional principles the public might soon become educated to a fuller understanding of them.

FEMALE PILLS.

To the Editors of THE LANCET.

SIRS,—I enclose a sheet of lavatory paper from the ladies' lavatory at Dover Harbour Station, South-Eastern and Chatham Railway. It would be interesting to know who is responsible for its selection and what they receive for doing so. I am, Sirs, yours faithfully,

April 14th, 1907. M.D.

*** The paper enclosed bears the following inscription:—

LADIES.

TIME TRIES ALL THINGS BUT DR. JOHN HOOPER'S

FEMALE PILLS,

which were universally known in 1743

and still stands the Premier Remedy for all Female Complaints.

A Coupon is placed round each box of the genuine Dr. John Hooper's Female Pills, and Bonuses will be given to the persons sending in the greatest number of these Coupons to Messrs. May, Roberts, and Co., 9, Clerkenwell-road, London, E.C., by the 30th June, as follows, viz.:—

£5 5*s.* for the person sending in the largest number.
£3 3*s.* for the person sending in the second largest number.
£2 2*s.* for the person sending in the third largest number.

We do not endorse the suggestion of our correspondent that anyone has been bribed to assist in the dissemination of quack circulars, but we think that the South-Eastern and Chatham Railway might supply to passengers curling papers free from nasty advertisements.—ED. L.

"CHRISTIAN SCIENCE" AND MEDICINE.

IN the issue of the *Glasgow Herald* of April 19th appears a report of a lecture on "Christian Science" at which it is reported that "Dr. W. F. Wilding, Manchester," presided. Dr. Wilding is reported to have said "that 19 years of his life had been spent in the study of medicine." His daughter who had suffered from tubercular disease and who was regarded as incurable was healed when "Christian Science" was resorted to. Dr. Wilding's name does not appear in the current Medical Register. In THE LANCET of April 9th, 1904, page 1025, we mentioned that we had received a copy of the *Christian Science Journal* which contained an experience "of one who practised medicine for 12 years and then came to Christian Science." This gentleman was named Mr. W. F. Wilding, who then signed himself M.R.C.S., L.R.C.P. On referring to an old number of the Medical Directory we see that Mr. Wilding qualified in 1890. If this was so he either took an unconscionable time to get qualified or he has been studying medicine ever since he came to "Christian Science," or else how does he make up 19 years? It would be interesting to know whence Mr. Wilding derives his title of "Doctor."

BLACKFELLOW DOCTORS.

IN Dr. A. W. Howitt's "Native Tribes of South-East Australia," published in 1904, a most interesting account is given of the "medicine-men," or "blackfellow doctors," of Australian tribes, now fast becoming extinct. The medicine-man would seem to be the ancestor or prototype rather of the mediæval sorcerer than of the scientific medical man of post-Renaissance times. His powers are chiefly of the supernatural order. "He is everywhere believed to have received his dreaded power from some supernatural source, or being" or from the spirits of ancestors. This power enables him to inject diseases, as it were, into people at a distance, as well as to cure disease by striking at its secret originator, who is usually a rival medicine-man in a neighbouring tribe. He can also preserve people from disease. He works with charms, and individual medicine-men, or each group of them, possess charms peculiar to themselves. In all cases the "blackfellow doctor" "is credited with being able to see men in their incorporeal state, either temporarily as a wraith, or permanently separated from their body as a ghost, which is invisible to other eyes. He can ascend to ghost-land beyond the sky, or can transport himself, or be transported by the ghosts, from one spot of earth to another at will, much after the manner of the Buddhist Arhat. He can, it is also thought, assume animal forms or control the elements." Savages all the world over, as Dr. Howitt further points out, have similar beliefs, which linger here and there, even among the most civilised peoples. Besides being magicians, medicine-men are often headmen of tribes, councillors, rain-makers, orators, or song-makers. Dr. Howitt does not believe them to be conscious quacks. Such imposture as they practise is usually the outcome of a desire to bolster up supernatural powers in which they believe. In this they resemble "Mr. Sludge" the medium, whose swindling was a form of *esprit de corps*. Whatever they may be, medicine-men undoubtedly are the clever people, the "intellectuals" of savage society, and as such they command sympathy and respect among their fellows.

THE MARINE BIOLOGICAL ASSOCIATION OF THE WEST OF SCOTLAND.

FOR some time past there has been a good deal of difference of opinion among those who take an interest in this association as regards the policy and objects of the association, and within the last few weeks a crisis has been reached in its affairs. The main objects of the association as carried out at the marine station at Millport are understood to be threefold—viz.: (*a*) the investigation of the marine fauna and flora of the Clyde sea area, which implies a systematic biological survey of the area involved; (*b*) educational work, in the way of encouraging the visits of scientific societies, holding classes at suitable times for teachers and others, and in every possible way encouraging and assisting amateur marine biologists; and (*c*) the maintenance of such features as may attract the general public, and these are represented at Millport by the Robertson Museum and the aquarium. At the annual general meeting of the association the committee of management was severely criticised on the ground that it was laying too much stress on the first part of the association's work and allowing the more popular sides to fall into abeyance to such an extent that the station would gradually tend to become more and more of interest to the expert and special worker in biology, while it would inevitably become of less help to the amateur marine biologist and of little interest to the general public. As an amendment to the report of the committee on the work of the association was carried by a small majority, the committee resigned and the meeting proceeded to elect a new committee. Some time must elapse before it can be seen on what lines the new committee intends to proceed, but it is to be hoped that it will be realised by those who have control of the association that to carry on successfully the Millport Marine Station and to conserve the interests of all subscribers the research, the educational, and popular sides must, if possible, be carried on *pari passu*.

A MODIFIED BINAURAL STETHOSCOPE.

To the Editors of THE LANCET.

SIRS,—Binaural stethoscopes of the usual pattern must have struck everyone as being somewhat awkward—at least, in appearance. There being no apparent reason why the conducting air column should be divided immediately at the chest-piece I have had made a stethoscope in which the division takes place as near as practicable to the ears. The distal ends of the metal tubes curve inward instead of outward and are connected to the metal "V" tube forming the junction by short lengths of rubber tubing. The advantages claimed for this over the usual pattern are: (1) greater convenience in use; (2) a neater appearance; and (3) increased compactness when folded and the shorter length of rubber tubing required. The alterations mentioned have been most satisfactorily carried out by the Medical Supply Association, 228, Gray's Inn-road, London, W.C.

I am, Sirs, yours faithfully,

J. INMAN LANGLEY, M.R.C.S. Eng., L.R.C.P. Lond.

April 5th, 1907.

THE ATTITUDE OF JURIES TO MEDICAL EXPERT TESTIMONY.

THIS matter has recently been discussed at length in the New York Court of Appeal in the case of Kelly *v.* Wills. The facts were as follows:—A builder's labourer fell some 20 feet and was crushed by falling building material, so that his left leg was fractured in two places, his right ankle was fractured and dislocated, and his left side was severely bruised. 26 days later he died suddenly in hospital, the cause of death being given as embolism. When the case came into court a recognised medical expert said that in the absence of a necropsy the statement as to the cause of death was a mere conjecture; other medical witnesses supported this view. The jury being thus in doubt

were directed that it was not their function in such circumstances to determine the exact and definite cause of death with the scientific precision of a physician, for the medical evidence adduced was inconclusive; upon the evidence and failing any apparent intervening cause they might find that the death probably arose from the injury. In this way the jury declined to discuss how far the expert testimony should be regarded as medical fact and how far it should be recognised as medical opinion.

ODD MEDICAL TERMS.

To the Editors of THE LANCET.

SIRS,—One frequently meets with bizarre renderings of medical terms among the illiterate, but I fancy the following must be unique and worth preserving. A woman called to consult me the other day, and on my asking her what she complained of I was astounded by this information, "the Cossacks has been very unreg'lar lately!" The gentlemen in question have always been considered irregular in their habits, but this is the first time I have heard of them having been observed so far south of the equator.

I am, Sirs, yours faithfully,

P. L. TOWNLEY, B.A., M.B., Ch.M yd.

Gayndah, Queensland, March 13th, 1907.

THE JONES HOMES AT SANDGATE.

THE Sandgate urban district council recently prosecuted before the Elham county bench Mr. Percy Harold Jones who with his family are the proprietors of a certain number of houses in Sandgate called the Jones Homes. These are used for the reception of convalescent tuberculous patients. The prosecution was for committing an offence under the provisions of the Public Health Act by overcrowding at Ontario House and at Cambridge House. The case took two days to hear and as a result the justices came to the unanimous opinion that a nuisance existed and was likely to recur. They therefore made an order prohibiting the recurrence of the nuisance. This order was made with regard to both the houses. It will be remembered that we dealt at length with these homes in our issue of August 22nd, 1903, when they were under the management of Mr. J. J. Jones, father of Mr. P. H. Jones.

Veritas (R.A.M.C.).—It is impossible, from the information supplied, to say whether the prostatic abscess has burst into the urethra or into the bladder, but the point may sometimes be determined as follows. If, at the commencement of micturition, some unmixed pus is passed before any urine, then it is very probable that the abscess has burst into the urethra. If, on the other hand, the abscess has burst into the bladder the pus is intimately mixed with the urine. As the patient is improving rapidly it will be safe to let him sit up a little or even to take a little exercise in his room. He should not return to his work until the urine is clear, unless the cessation of the suppuration is very much delayed. Our correspondent does not say of what the "sediment" consists. Has it been examined microscopically? It would be as well to stain for gonococci.

S. G. B.—Moneylenders' circulars are a nuisance to us all. The one which our correspondent incloses is no more likely to catch the unwary than those issued by other members of the fraternity.

Blackpool.—Will our correspondent who has sent us an unsigned letter about a communication on heroin kindly send us his name?

M.R.C.S.—We think that in the circumstances described by our correspondent B would be within his rights to attend the patient.

M.B.—Our correspondent has omitted to enclose his name and address.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (3 P.M.), St. Mark's (2.30 P.M.).

TUESDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.), Tottenham (2.30 P.M.).

WEDNESDAY (1st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.).

THURSDAY (2nd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.). Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (2.30 P.M.), Tottenham (Gynæcological, 2.30 P.M.).

FRIDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.).

SATURDAY (4th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (1st).—OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M.: Specimens will be shown by Mr. J. Bland-Sutton, Dr. Lewers, Dr. M. Thorne, and Dr. Longridge. Short Communication:—Dr. C. R. Porter (introduced by Dr. R. Andrews): Case of Fatal Rupture of the Bladder during Labour. Paper:—Dr. A. Doran: A Case of Malignant Vaginal Polypus Secondary to an Adrenal Tumour of the Kidney.

THURSDAY (2nd).—NORTH-EAST LONDON CLINICAL SOCIETY (Tottenham Hospital, N.).—4 P.M.: Discussion on the Use of Posture in Surgical Treatment (opened by Mr. H. W. Carson).

FRIDAY (3rd).—SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN (11, Chandos-street, Cavendish-square, W.).—5 P.M.: Clinical Evening for the Exhibition of Cases followed by Discussion. Patients in attendance at 4.30 P.M.

EPIDEMIOLOGICAL SOCIETY (11, Chandos-street, Cavendish-square, W.).—8.30 P.M.: Paper:—Dr. A. K. Chalmers: Some Recent Manifestations of Cerebro-spinal Meningitis.

WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary).—Presidential Address:—Mr. C. J. Heath: The Duty and Power of Restoring the Hearing when Operating for Chronic Suppuration of the Middle Ear.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Exhibition of Cases and Specimens.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (29th).—ROYAL COLLEGE OF PHYSICIANS OF LONDON (Pall Mall East).—5 P.M.: Oliver-Sharpey Lecture:—Dr. W. D. Halliburton: New Facts in Relation to the Processes of Nervous Degeneration and Regeneration.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. X Rays. Mr. Dunn: Diseases of the Eye. 2.30 P.M.: Operations.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. G. Little: Clinique. (Skin.) 5.15 P.M.: Lecture:—Mr. A. Carless: Some Fractures about the Knee-joint (with lantern slides).

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—Cliniques:—9.30 A.M.: Surgical Out-patient (Mr. H. Evans). 2.30 P.M.: Medical Out-patient (Dr. Whipham), Throat, Nose, and Ear (Mr. Carson); X Ray (Dr. Pirie).

TUESDAY (30th).—ROYAL COLLEGE OF PHYSICIANS OF LONDON (Pall Mall East).—5 P.M.: Oliver-Sharpey Lecture:—Dr. W. D. Halliburton: New Facts in Relation to the Processes of Nervous Degeneration and Regeneration.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Moullin: Gynæcological Operations. 2 P.M.: Medical and Surgical Clinics. X Rays. Dr. Ball: Diseases of the Throat, Nose, and Ear. 2.30 P.M.: Operations. Dr. Abraham: Diseases of the Skin.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. A. Morison: Clinique. (Medical.) 5.15 P.M.: Lecture:—Dr. D. Sommerville: Medical Conditions of the Alimentary Tract.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—Cliniques:—10.30 A.M.: Medical Out-patient (Dr. Auld). 2.30 P.M.: Gynæcological Out-patient (Dr. Giles), Surgical Out-patient (Mr. Edmunds). Surgical Operations (Mr. Carson).

GENERAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—3.45 P.M.: Demonstration:—Mr. C. Nourse: Larynx.

WEDNESDAY (1st).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. Dr. A. Saunders: Diseases of Children. 2 P.M.: Medical and Surgical Clinics. X Rays. 2.30 P.M.: Operations. Dr. Robinson: Diseases of Women.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. A. H. Tubby: Clinique. (Surgical.) 5.15 P.M.: Lecture:—Dr. P. Stewart: Migraine.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—Cliniques:—2.30 P.M.: Skin (Dr. Meachen), Eye (Mr. Brooks), Medical Out-patient (Dr. Whipham).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. F. Taylor: Medicine. 3.30 P.M.: Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

THURSDAY (2nd).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. X Rays. Mr. Dunn: Diseases of the Eye. 2.30 P.M.: Operations.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M.: Lecture:—Mr. E. Clarke: The Fundus Oculi in Health and Disease (with lantern slides).

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—2.30 P.M.: Gynæcological Operations (Dr. Giles). Cliniques:—Medical Out-patient (Dr. Whiting), Surgical Out-patient (Mr. Carson). 3 P.M.: Medical In-patient (Dr. Chappel).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. G. Rankin: Medicine. 3.15 P.M.: Sir W. Bennett: Surgery. 4 P.M.: Dr. H. Cooper: Radiography. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat.

CHARING CROSS HOSPITAL.—4 P.M.: Dr. Galloway: Demonstration (Medical). (Post-Graduate Course.)

FRIDAY (3rd).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Moullin: Gynæcological Operations. 2 P.M.: Medical and Surgical Clinics. Dr. Ball: Diseases of the Throat, Nose, and Ear. X Rays. 2.30 P.M.: Operations. Dr. Abraham: Diseases of the Skin.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. B. Harman: Clinique. (Eye.)

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—9.30 A.M.: Clinique:—Surgical Out-patient (Mr. H. Evans). 2.30 P.M.: Surgical Operations (Mr. Edmunds). Cliniques:—Medical Out-patient (Dr. Auld), Eye (Mr. Brooks). 3 P.M.: Medical In-patient (Dr. Leslie).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. R. Bradford: Medicine. 3.15 P.M.: Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Skin.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—3.45 P.M.: Demonstration:—Mr. C. Nourse: Larynx.

SATURDAY (4th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. 2 P.M.: Medical and Surgical Clinics. X Rays. 2.30 P.M.: Operations. Dr. Robinson: Diseases of Women.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich.)—2.30 P.M.: Operations. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

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Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 25th, 1907.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
April 19	30·06	S.W.	...	69	49	38	39	41	Cloudy
" 20	30·17	S.W.	...	97	54	39	41	45	Fine
" 21	29·94	S.W.	0·18	55	50	45	49	50	Raining
" 22	30·23	W.	0·17	101	60	45	46	48	Fine
" 23	30·32	W.	...	100	61	45	49	52	Cloudy
" 24	30·29	W.	...	118	72	52	55	58	Cloudy
" 25	30·21	W.	...	74	53	54	55	59	Cloudy

During the week marked copies of the following newspapers have been received:—*Westminster Gazette, Edinburgh News, Daily Telegraph, Standard, Daily Express, Norwich Eastern Daily Express, Edinburgh Dispatch, Morning Post, Daily News, Evening News, Northern Whig, Aberdeen Journal, Deaf Times, Yorkshire Observer, Optician, Glasgow News, Manchester Despatch, The Power Laundr., Nottingham Evening News, Morning Advertiser, Chatham News, Blackpool Gazette, Bath Herald, &c.*

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